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CLINICAL LECTURES.

AMPUTATION OF THE FORE-ARM—SEBACEOUS CYST—RACHITIS—CANCER OF THE BREAST.

BY PROFESSOR ROSWELL PARK,

BUFFALO, N. Y.

AMPUTATION OF FORE-ARM.

Gentlemen:—The first case was a patient whose fore-arm had been amputated ten days before. The operation had been done with every antiseptic precaution and there had been no pain nor fever nor other symptoms calling for a removing of the dressing. The deeper dressings were somewhat moist from perspiration or some discharge, but there was no evidence of suppuration. With the exception of a few points at which the skin had not quite healed, union by first intention had occurred in ten days under the primary dressing.

SEBACEOUS CYST.

The next patient was a young man who exhibited a swelling just in front of the hyoid bone, of about the size of a horse chestnut, dark in color and fluctuating on pressure. The patient complained of tenderness and much discomfort on account of the growth, and stated that a similar one had been removed from the same place two years ago. Pressure on the tumor caused its contents to exude, much resembling a Pharaoh's serpent as it burns. This phenomenon showed the tumor to be a sebaceous cyst and its discoloration, the pain and local heat and the appearance of the contents showed that it was inflamed and suppurating. Dr. Park remarked that such cysts might occur almost anywhere about the body though they were most common about the head and neck. He had once removed one from the toughest part of the heel. He called atten-

tion to the fact that the opening through which the matter was pressed was the natural opening of the sebaceous duct in which the contents had accumulated so as to form a cyst. From the irritation of clothing, etc., inflammation in such cysts was a common occurrence and there was nothing to prevent the entrance through the duct of micro-organisms which would cause the breaking down of the sebaceous matter into pus. Such tumors had a tendency to recur and, therefore, the proper method of treatment consisted in a removal of the sac whenever possible. Whether this had been done at the former operation could not be learned from the patient. The blackness of the skin overlying the tumor indicated that it would soon slough away if nothing were done and thus a spontaneous evacuation of the cyst would take place. After injecting a cocaine solution, an incision was made, opening the tumor and allowing the semi-purulent sebaceous matter to escape. Contrary to the usual state of affairs, the cyst wall was so adherent to the surrounding tissues that it could not be removed readily. The pyophylactic membrane (a term which Dr. Park prefers to the misleading one of pyogenic membrane) was, therefore, cut away in pieces, and to make sure of its extirpation, the cavity was swabbed out with a caustic; carbolic acid being used on account of its combining the properties of a caustic, an antiseptic and an anæsthetic. The cavity was then packed with antiseptic gauze so as to ensure its healing by granulations from the bottom, and a dressing applied.

RACHITIS.

The next patient was a child eight years old with marked evidences of rachitis. There was a very exaggerated anterior curvature of the right femur and much lateral curvature of the left femur and of both tibiae. The deformity of the bones caused knock-knee, uncertainty of gait and a peculiar carriage of the body. The thighs had been previously cleansed and protected with antiseptic band-

ages in anticipation of the operation. A small incision was made just above the inner condyle of the femur, the chisel inserted and osteotomy performed. Dr. Park referred to this operation as a purposely inflicted compound fracture, all the circumstances being favorable and particular pains being taken to preserve asepais. An antiseptic dressing was bound over each wound and after a little delay the deformity was corrected and a plaster of Paris bandage applied to each limb.

A woman of fifty presented herself with a tumor pouching into the cheek from the jaw. There was no history of tumor in the family. The patient had known of the existence of the growth for nineteen years. The growth was painless although annoying on account of the mechanical interference with talking and eating. It had grown very slowly till four years ago when the patient conceived the idea that if she had her teeth pulled, the growth would be checked. The removal of the teeth, however had rather the opposite effect though the increase in size had not been rapid.

By the history of its long duration and the absence of adhesions, ulceration and pain, malignant tumor was excluded. The most common non-malignant growths from the jaw, Dr. Park said, were fibrous or cystic or both combined. Fibrous tumors sprang very frequently from the periosteum. Any kind of tumor springing from the jaw was called epulis by a certain class of writers but he objected to this general use of the term epulis which he thought should be restricted in its application to a fibro-sarcoma very slightly malignant in the beginning but which may develop increased malignancy. The present tumor was moveable and extended back no further than the end of the alveolar process and did not reach as high as the orbital plate. There was no fluctuation and the diagnosis was made of a fibroma which might possibly contain a small cyst in its interior. Although the growth could have been removed much more easily, by an external incision for the cosmetic effect the opening was made from within the cavity of the mouth. Only the fingers and a pair of scissors were used in dissecting the tumor out of the cheek. It was a hard, somewhat modulated mass, the size of a hen's egg and entirely fibrous in its nature.

CANCER OF THE BREAST.

The next patient was a woman 45 years of age, who had had eight children. Although there was no history of cancer in the family

and no history of any lesion of the breast—not even a fissure of the nipple—yet a year ago a lump had appeared in the breast and had increased in size and now presented unmistakable evidences of malignancy. Of late the patient had suffered much from pain, referred as is often the case, to the arm. This was due to interference with the intercosto-humeral nerve.

Dr. Park said, "A tumor of any considerable size occurring in the breast of a woman at about the menopause when there is the history of even the slightest increase in size, accompanied by a certain fixation of the growth in the surrounding tissues, is almost always of cancerous nature." If with this condition there is some retraction of the nipple and an enlargement of the glands in the axilla, or along the border of the pectoralis major leading to the axilla, the diagnosis becomes still more certain, and but one advice can be given to the patient as to treatment if the case is seen early enough—immediate removal. In removing the mammary gland alone for cancer, we afford only half the benefit which the surgeon can give. We should remove in addition the cellular tissue and lymphatic glands of the axilla. It is the general opinion of the best surgeons the world over, that the axilla should be "cleaned out" in all cases of cancer of the breast when a radical cure is possible. Even if all the cancerous tissue is not removed by the operation, death is usually delayed. I might enumerate five purposes which we may have in view in operating on cancers. First of all, the radical removal of the growth which we often achieve if the case is seen early enough. Secondly, we operate later for temporary relief and to prolong life, such operations are frequently repeated. Thirdly, we operate sometimes purely for relief of pain, removing structures that are highly sensitive on account of the disease. A fourth indication for operation is excessive sloughing. The growth may be scraped repeatedly if necessary. A fifth indication is hæmorrhage as in a fungous cancer. The operation for the removal of the breast is simple but sanguinary. It is not dangerous. An elliptical incision is made, the nipple being removed, leaving enough skin, if possible, to close the wound after the removal of the gland.

In preparing for the operation the razor was used, not because of an excessive amount of hair, but because the razor is regarded by Dr. Park as an efficient dermal curette, and because he considers that the fine down is as

capable of lodging bacteria as true hair. The cancerous mass had grown outward and was just on the point of ulcerating. It was removed according to the method indicated as thoroughly as possible, but it had extended so far that Dr. Park expressed his doubts as to the ultimate cure of the case. The tumor was found to be, as had been predicted, a scirrhus cancer, the only form of carcinoma which is at all common in the breast.

COMMUNICATIONS.

RIGHT OCCIPITO-POSTERIOR DELIVERY.

A. L. BENEDICT, M. D.,
BUFFALO, N. Y.

On Thursday, June 18, I was called to see Olive S., aged 19, in labor with her first child. Two months prior I had prescribed for her on account of gonorrhœa, but the treatment had not been persisted in and there still remained suppuration in one of the vulvo-vaginal glands. There was no very definite history of symptoms that could be construed as indicating gonorrhœal involvement of the uterus, tubes, or peritoneum.

The patient stated that she had had what she took for labor pains on Sunday, and that since Tuesday night the pains had been more acute and quite frequent. Two physicians had seen the case in turn before I was summoned. At 12 o'clock Thursday noon, I made my first examination. The child occupied the normal axis of the uterus, the head was down, the foetal heart-beat could be heard indistinctly and momentarily at different points below the umbilicus and the foetal movements were quite active. The cervix was thick and tough. The os was about the size of a quarter, distended by the unruptured bag of waters. The head had apparently not yet engaged. A bichloride douche was given and an enema ordered.

At 10.30 P. M. the os was a little larger, the foetal head was lower but had not yet engaged. It seemed to distend the cervix anteriorly but behind, the finger met with no obstruction through the amniotic sac except that something soft, apparently an arm or leg or the cord, could just be touched. The heart beat could be heard distinctly below the umbilicus, first on the left side, then on the right of the mother's abdomen. It could

not be heard in the same place long enough to be counted. The patient had suffered considerable pain since noon.

At 6 A. M., June 19, the waters broke, about a vesselful being discharged. At 7.15 I found the os the size of a half dollar, with the head engaged. The heart-beat could now be distinctly heard in its usual location obliquely downward and to the left from the umbilicus. It was 156 to the minute. The patient slept most of the time from the breaking of the waters until 9 o'clock when the pains began again. At 10.15 another examination was made showing that some progress in labor had occurred. At 2 P. M. the cervix was dilated nearly to its full extent but it still retained the thickness and inelasticity already referred to. Other examinations were made at 5 and at 10 P. M., slow progress being noted at each examination. Full dilatation of the cervix was not quite accomplished at 10 o'clock. The labor, although delayed considerably after the rupture of the amniotic sac was not dry, in fact there had apparently been a condition of moderate hydramnion.

At 1.30 A. M., June 20, the head was on the perineum and the pains were frequent and severe. At 2.10 the head was born, the occiput pointing posteriorly and to the right. The mechanism of final expulsion, as aided by the hand, being first flexion till the occiput emerged posteriorly and then extension followed by spontaneous external rotation. The cord was found to be hooked over the right shoulder. It was slipped off and the body of the child extracted. The child made only one or two feeble attempts at respiration. The throat was clear but plugs of tenacious mucus hung from the nostrils, having evidently been inspired from the vagina. These were removed, the cord tied and cut and artificial respiration tried for some minutes. As this was not successful, the child was immersed in hot water but no reflex effort at breathing could be evoked. Repeated brief auscultations of the chest showed that both the heart and the lungs were quiet. After about twenty minutes, artificial respiration was abandoned and attention turned to the placenta. Meanwhile the mother had been resting without pains. After a little manipulation by Cr  d  s method and two pains, the placenta was expelled, accompanied by a double handful of clots. I would like to protest, in passing, against the forcible expulsion of the placenta by the external hand. It is cruel, unnecessary and unsafe to exert all one's strength in pushing the uterus against the spinal column as some men do.

The proper idea, it seems to me, is first to stimulate a uterine contraction and then to brace the hand against the uterus so as to give it the same degree of support which the abdominal muscles do in the second stage but which they can no longer render on account of the diminished size of the uterus. If moderate pressure from without is ineffectual after a reasonable time, it is better to remove the placenta by the hand in the uterus using proper antiseptic precautions than to exert violent pressure.

The placenta in this instance was pale, somewhat friable on the uterine surface and the decidua was thickened. The secundines had rather a bad odor. Fluid extract of ergot, 2 c. c. was administered by the mouth and a 1-5000 warm bichloride injection was given. After some further delay, the patient was cleansed, an occlusion bandage applied and direction given to let the breasts—which were unusually large—entirely alone.

At ten o'clock the patient was doing well, having flowed very little. An autopsy on the child's body was made at which the following notes were taken: Female child (confer rapidity of heart-beat), length 17 inches, circumference of head 12 inches, length of cord 18 inches. Head molded so that the occiput is flattened, the anterior portion of the skull projecting upward. Large caput succedaneum over left fronto-parietal region. Very little vernix caseosa. Reddish patches under axillæ and over arms. Petechiæ over dorsa of fore-arms and hands and over abdomen. Peritoneum distended with reddish-yellow fluid, almost entire atelectasis of lungs. The liver weighed 5½ ounces, the spleen one ounce, the estimated weight of the body being seven or eight pounds. According to Prof. Hirst of the University of Pennsylvania, the normal ratio of the weight of the spleen to that of the body is 1-300 and for the liver the ratio is 1-30. In this case the ratios were approximately 1-120 and 1-122. Although the suspicion of syphilis existed, no positive evidence of it could be found. An examination for fatty metamorphosis at the lower epiphyseal line of the femur could not be made on account of the objection of friends.

On the afternoon of June 21, the day following the completion of labor, I was called in haste to see the patient. She had been somewhat irrational and about five o'clock she had jumped from bed and crossed the room when she almost fainted. The pulse was found to be weak and rapid, the temperature was slightly over 100°, and the lochia were fetid. Whisky was given to re-

lieve the faintness and directions were sent to an assistant to give an intra-uterine douche, but, on account of a misunderstanding, only a vaginal douche was given. A prescription was left for quinine capsules, containing fifteen centigrammes each, with directions to take two that night and afterward three daily.

The next morning a vaginal followed by an intra-uterine douche (1:4000) was given and in the afternoon, a vaginal douche alone of the same strength was given. This treatment was repeated Tuesday and Wednesday, the factor of the lochia being diminished, but not removed, and the temperature ranging from 100° in the morning to not quite 103° in the afternoon. Thursday and Friday only vaginal injections were thought necessary, as the temperature fell nearly to normal, and a good recovery has since been made. There was slight caking of the breasts, which disappeared under the "let-alone" treatment. They were, however, supported by a bandage.

As I began my attendance on the case with a bichloride douche and followed the completion of the third stage of labor with another, used a bichloride solution for the hands before all manipulations and applied an antiseptic occlusion bandage after labor, I do not feel responsible for the septic element which entered into the case. The tedious labor predisposed to it and the gonorrhœal discharge and possibly earlier digital examinations would fully explain it. Forceps were not used, as at each examination some progress was noted. Rest was secured once by the use of morphine, later by bromide of potassium, one gramme and acetanilid, twenty-five centigrammes.

I will frankly admit an error in diagnosing the position. The child was plainly in the normal axis of the uterus and pelvis, the skull was presenting. Owing to the resistance of the perinæum and to the density of the cervix, the vaginal examination was not very satisfactory. Early in labor only a small circle of the fetal skull could be felt, later the land marks were obscured by the caput succedaneum. On account of the thickness of the abdominal walls and the excess of liquor amnii the limbs of the fœtus could not be felt anteriorly and the distinctness with which the heart sounds were heard after the head had engaged, led me to believe that the child's back was turned anteriorly. It was not until late in labor, therefore that the true condition was appreciated. I am inclined to think that the moveable body which I felt behind the

head early in labor was the cord which had prolapsed far enough to catch over the right shoulder. It does not seem, however, as if it could have been shortened sufficiently to have delayed labor.

APPENDICITIS.

BY WM. L. CONKLIN, M. D.,

ROCHESTER, N. Y.

(Read before the Monroe County Medical Society, May, 1891.)

REPORT OF CASE.

Wednesday, December 3rd, 1890, I was called to see Chas. B.; 19 years of age; a shoemaker by trade. He gave a history of uniform good health up to that time.

For the relief of constipation, which had been troublesome for a few days, he took a cathartic Monday evening, which resulted in a free movement Tuesday morning. That afternoon some tenderness of the bowels was complained of, and the following night he was awakened by severe pain in the abdomen. When seen Wednesday morning the pain had diminished, and was confined to the right iliac region. There was slight tenderness on firm pressure over the vermiform appendix. During the afternoon the pain gradually increased, and opiates were given for its relief. Several hours of sleep and partial relief of pain were secured by a moderate use of morphine that night.

2nd day. Pain was not severe in the morning, but tenderness had increased and was most marked near the McBurney point. During the forenoon pain was complained of again. I made a diagnosis of appendicitis and asked that counsel be called. Dr. Zimmer saw the patient that afternoon, and after a thorough examination, confirmed the diagnosis of trouble in the region of the appendix.

He thought the time for operation had not come and advised a continuation of the morphine in sufficient quantities to control pain. Poultices were applied but could not be borne. An enema of soap and water brought away a small quantity of fecal matter.

3rd day. Though a thorough examination was made, under chloroform, no tumor could be detected, either by abdominal palpation or through the rectum. There was great rigidity of the abdominal muscles

even after a free use of the anæsthetic. In the afternoon the patient was seen by Drs. Whitbeck and Zimmer. It was not thought that pus had formed at that time and further delay in operating was deemed advisable. Troublesome nausea appeared for the first time. An ounce of castor oil was given followed by $\frac{1}{2}$ oz. epsom salts. No effect.

4th day. Gave grs. x calomel, followed by 2 ozs. solution citrate magnesia every hour for four hours. No effect.

5th day. Nausea had disappeared. A rubber tube was carried about 12 inches into the bowel and water and glycerine injected. This resulted in two or three evacuations containing some solid feces.

6th day. Still complained of pain. Gave 12 oz. solution citrate magnesia in two doses. This was followed by two liquid stools.

7th day. I was able to detect a small swelling, an inch to the inner side of the anterior superior process on a line drawn from that process to the umbilicus.

8th day. Severe pain complained of at one time during the night. The presence of foetid pus was demonstrated by introducing a hypodermic needle at the point of greatest tenderness. That afternoon an operation was performed by Dr. Zimmer, assisted by Drs. Wilson, Dow and Combs. A four-inch incision was made parallel with the crest of the ilium and Poupart's ligament, with its center one inch from the anterior superior spinous process. After careful dissection through skin, superficial fascia, aponeurosis of external oblique internal oblique, transversalis and transversalis fascia, the abscess was found and evacuated. The pus cavity extended upwards parallel with the crest of the ilium and contained an ounce or more of foetid pus. The appendix could not be found. It was thought that it had either ulcerated off or become embedded in new tissue. The cavity was washed out with boiled water and a rubber drainage tube passed through the incision and a counter opening above. The incision was closed with catgut sutures passing through the skin and superficial fascia and an antiseptic dressing applied. A foetid discharge continued for two weeks, the odor then disappeared and the wound healed rapidly and completely.

REMARKS.—I wish to refer briefly to a few points suggested by the study of this case, which seem to me of special interest, and upon which I should be glad to hear an expression of opinion.

First, as to diagnosis. In a paper on "Appendicitis," by Prof. Lewis A. Simson,

read before the New York Surgical Society, Oct. 8th, 1890, (*N. Y. Medical Journal*, Oct. 25th, 1890) I find the following:

"The localization of the maximum pain, or of the only pain, on pressure at or very near the point indicated by Dr. McBurney, two inches from the anterior superior spine of the ilium, on a line drawn from it to the umbilicus, has been constant, and, in pointing out this symptom, Dr. McBurney has rendered us a service which it is difficult to estimate too highly. It has made the recognition of appendicitis, in its early stages, at least, easy for everyone."

It is doubtful whether all would place as high a value upon the McBurney point as does Prof. Stimson, but I am told that in the discussion of the subject at Albany last winter its importance as a means of diagnosis was fully recognized. In the case just reported the point of greatest tenderness was a little to the outer side of the McBurney point. But though it may be a comparatively easy matter to diagnose appendicitis in its early stages, it is by no means easy to say what its course will be—whether it is to end quickly in resolution; result in the formation of an abscess which will seriously menace the life of the patient, or by an unprotected perforation light up an almost surely fatal peritonitis. These are hard problems to solve, and, unfortunately the aids to their solution are not numerous or altogether trustworthy.

The temperature does not seem to be a reliable guide. In the case reported it was 98° the morning of the first day; 101° and 102° the second and third days; subnormal the 4th; normal the 5th and 6th, and slightly elevated the 7th and 8th. On the 4th day, when the mouth and axillary temperature were sub-normal (97.1-5) the rectal temperature 100.2-5, a difference of 3.1-5°. In another case (Stimson's) there was a difference of 6.1° between the temperature of the mouth and that of the rectum on the 6th day. Whether this unusual difference is of any diagnostic value I am unable to say. Dr. Chas. K. Briddon thinks that when the pus forms in the pelvic cavity, to a limited extent, and becomes encysted, the temperature falls. Prof. Stimson says: "If the temperature is above 102° two days after the beginning of the attack, suppuration is imminent or already present."

The pulse is thought to be of more value than the temperature as an aid to diagnosis; but it may be found to furnish very unsatisfactory information, if any, especially if the abscess is small. In the case of Chas. B. it

did not exceed 84 and was 78 just before the operation.

Great pain may be followed by resolution, and slight pain by fatal perforation; severe pain appearing suddenly during the course of an attack would certainly be looked upon with suspicion. It may be impossible to detect a tumor, or a dull percussion note for several days after the first symptoms appear. I was unable to do so until the 7th day. It is certainly not by attention to any one symptom, taken in connection with the time which has elapsed since the attack began, that we may hope to obtain a true idea of each individual case.

The difficulty of determining the pathological condition present after a diagnosis of appendicitis has been made, taken in connection with the dangers of delay, furnishes a strong argument in favor of early operative interference. In a series of 11 cases, with 10 recovered, recently reported by Dr. McBurney, (*N. Y. Med. Jour.*, Dec. 21, 1889) an operation was performed in from 40 hours to 7 days. In 9 of the 11 cases the appendix was removed. Pus was found in 7 or more. In one case operated in 49 hours after pain was first noticed the appendix consisted of a thin-walled sac, shut off from the cæcum by stricture, and containing at least half an ounce of fetid pus. That a rupture of this sac, producing a fatal peritonitis, would have resulted from a delay in operating of a few days, or even hours, is at least probable. In another case, reported by Dr. Lange, "Not only perforation but extensive destruction of the appendix and far gone infection of the peritoneum had been found by the middle of the second day." Out of a series of 21 operations reported by Dr. Stimson, 5 were performed in the early or doubtful stage without a death, and, as he says, without a moment's anxiety beyond that which belonged to the taking of the step. Dr. McBurney says, "If it can be shown by future experience that the exploratory incision for inspection of the diseased appendix is much more free from danger than the expectant treatment, then there could be but one answer to the question—what is the best treatment?"

The use of certain terms in articles on this subject may fairly be criticised, because they do not accurately describe the true pathological condition.

We read of *extra-peritoneal* abscess resulting from appendicitis. If an abscess results from inflammation of the appendix it must certainly be of *intra-peritoneal* origin, and should be called an *intra-peritoneal* abscess.

unless the pus has forced its way through the peritoneum, and there is abundant proof that this latter condition is a very rare one indeed. McBurney says further that in not a single one of the early operations for appendicitis which he has done or seen done has there been the slightest doubt as to the fact that the incipient abscess was entirely within the peritoneal cavity. Stimson says, in speaking of a series of 21 cases already referred to: "The pus in all the cases, with possibly one exception, was *intra-peritoneal*." This is an important point in the pathology of appendicitis, because of its bearing on the questions of operation. In the evacuation of an abscess the peritoneum must be cut to a greater or less extent, whether the oblique incision is made, or the one along the outer border of the rectus. This being the case it would seem that, as a rule, the latter is to be preferred, because of the better opportunity it gives for the removal of the appendix, if that should be deemed advisable.

A CASE OF FRACTURE AND DISLOCATION OF THE SPINE WITH OPERATION.*

*Read before the Ohio State Medical Society, June 18, 1891.

BY A. W. RIDENOUR, M. D.,

MASSILLON, OHIO.

In view of the rarity of these cases with the almost invariable result, I have thought proper to report a case that marks a new era—at least in my practice.

Dec. 11th, 1890, Martin Nye, aged 28, laborer, while driving through a shed on a load of lumber was caught between an overhead beam in such a manner as to crush the center of his back forwards at an acute angle, frightfully lacerating and crushing both hard and soft parts in that region.

Within half an hour after the accident I found the patient pulseless, the skin cold and clammy, the respiration sighing; very restless; jactitation, suffering frightful pain in back; sensation and motion absent from injury down; knee-jerk absent; reflex in legs absent.

On inspection at seat of injury I found a depression of fully one inch corresponding to seventh dorsal vertebrae, with absence of spinous process of eighth dorsal. This at once led me to inform the patient and friends of the exceeding gravity of the case,

and that the only hope of life lay in a speedy operation. Consent was readily given and at once carried out.

With the usual and necessary antiseptic preliminaries an incision about twelve inches long was made, commencing at the third and terminating at the ninth dorsal, separating muscles from either side and exposing the bony roof of the cord from the sixth to the ninth dorsal, inclusive. The muscles were crushed, soft, pulpy and mangled beyond recognition in the region of injury. The lamina of seventh dorsal was broken and separated from the body; the transverse process on either side of seventh was fractured, and the articulation for the ribs torn completely off; the ends of the ribs stuck up in the wound like two fists; the body of seventh vertebrae was dislocated forwards fully one inch, nearly slipping out anteriorly. The spinous process of seventh vertebrae was split and crushed. The spinous process of the eighth dorsal was not only split but actually inverted penetrating the cord and crushing it. The lamina of eighth was fractured, and the body fractured, but not dislocated. The membranes were punctured and badly lacerated at different points with full hæmorrhage in the arachnoid space. The cord was crushed at the juncture of the seventh vertebrae by the inverted spinous process of eighth; the cord was carried forward with the dislocated seventh vertebrae; and there was compression at the juncture with the sixth and eighth. Altogether I can not conceive of a more frightful injury unless we might include cutting off the cord and the immediate death of patient. The trephine was not resorted to because it did not seem necessary or safe, as the bones being soft can be separated readily with safer bone instruments.

All of the bony roof, from middle of ninth dorsal to and including middle of eighth dorsal vertebrae was removed. Passing my finger between the body of seventh dorsal I elevated it into position, smoothed all rough or sharp bony prominences; removed all clots; stopped all hæmorrhage; replaced the dislocated ribs as well as I could without any articular facets, and placed strands of catgut along the bottom of the wound in such a manner that the cord would not come in contact with them, or in fact with anything, (requiring some care here in the disposal of remaining bones and overlying muscles). The muscles were sutured carefully on either side; then sutured the skin; and finally applied a dry dressing.

The after treatment of this case was un-

eventful. Sensation returned at once in both lower extremities, motion was perceptible in the recti muscles at end of the 4th day. A catheter was used to pass urine until the 7th day when normal micturition returned. There was no control over the sphincter ani until the end of the 1st week. The knee-jerk was restored at end of 2d week. He could raise his limbs from bed at the end of the 5th week. He could walk with crutches at the end of three months. I applied plaster-of-paris jacket for support at end of 2d week.

The wound healed primarily in one week, without any pus and with three dressings. No fever at any time. Urine did not present any albumin or sugar, no casts or abnormal deposits, sp.-gr. 1.020.

The patient suffered no pain after the operation; no atrophy of muscles of the lower limbs since the operation; the joints were not thickened. The patient walks about with the aid of a cane, June 5th, 1891.

The patient is under the care of Dr. Marchand, of Canton, and is at the Stark county Infirmary. The Doctor reports the patient rapidly recovering his bodily vigor; can get around rapidly; and that the plaster was removed during April. *There is no deformity.* I would have wished the plaster bandage had remained on longer, but it seems that no ill effects followed its removal. I was kindly assisted in the operation by Drs. Miller and Reed, of Massillon.

The only plea I have to make in these cases where the diagnosis is made, is for an immediate, thorough and careful operation. A few hours delay, in my opinion, is sufficient to render the operation futile, and I have no hesitation in placing the cause of failure in so many of these operations to this cause. About eight years ago I reported a case to this society where I had made the operation three years after injury with the result of complete failure, the patient dying two weeks after of acute albuminuria.

But in doing this work the utmost care is required not only in removing all bony or other foreign material from the vicinity of the cord, but that no possible chance for subsequent hæmorrhage or pressure can occur, as even the pressure of a super-imposed muscle will be sufficient to deprive the cord of functional activity, or a small shaving of bone will cause inflammatory softening and death. Slight hæmorrhage will cause a clot that will act more rapidly than in the brain in causing death; but the operation can be done and should be made safe by care and without hurry, and I will repeat, no patient

should be allowed to die without an attempt to save him.

TRAUMATIC PARALYSIS.¹

BY F. J. GRONER, M. D.,
GRAND RAPIDS, MICH.

I introduced this topic before the Section of Surgery with the desire that some knowledge may be added to such an important subject, alighted as it is in our text books on surgery. The persistence of the present generation in bringing suits for damage against the attending physician makes it very important that the literature in this special field be advanced. Paralysis from injury is not uncommon, and it may as likely occur in your first case as in your second hundred.

I will illustrate my subject by giving you the history of several cases.

CASE I. A young man in good health, aged 17 years, was struck by a falling tree. The patient was brought six miles on a logging car, and I saw him three hours after the accident. He was then in a state of profound collapse, almost pulseless, showing the effect of severe injury. I gave $\frac{1}{4}$ grain morphia and 1-150 grain of atropine hypodermically and ordered external heat and brandy administered freely. I saw the patient several hours later. Condition slightly improved. I found fracture of right thigh, which I reduced, and severe injury of right shoulder and arm. As there was a relaxed condition of muscles and ligaments about shoulder joint, I applied a well padded shoulder cap and through splint to back of arm and forearm for support, as I intended to have patient moved to the Hospital the next day. The patient had not completely rallied from the shock the next morning. This showed the severity of the injury. At the Hospital I applied Buck's extension, for fractured thigh, removed the support from the arm and applied an evaporating lotion. The entire arm, forearm and hand became very much swollen, so much so that the entire arm was covered with blisters from the passive hyperæmia, and in many places there was necrosis of superficial tissues; the scars still remain. I at one time feared gangrenous sloughing of the entire tissue of the arm. The swelling gradually subsided and at the end of the fourth week, there was such

¹Read before the Surgical Section of the Michigan State Medical Society, June, 1891.

marked anæsthesia of the limb that we suspected paralysis, and so informed the patient and relatives.

In spite of friction, electricity, iodide of potassium, strychnia, etc., there is complete paralysis of all of the muscles of the shoulder, arm and forearm. The skin took on a glossy appearance; disorders of secretion, eczematous eruptions; there is practically complete atrophy of the muscles. The fingers are in a state of flexion so patient can lift and carry a pail of water. This is the only use that can be made of the arm. Electrical contractility is almost entirely lost.

One interesting feature in this case is, I have been charged with causing the paralysis. My reply is, "I was not the falling tree." Some physician suggested to the patient that I bandaged the arm too tightly and this caused the paralysis. This I deny in toto as the felt splints were heavily padded and secured by a many tailed bandage very loosely applied, and as I removed the dressing myself the next day, I found no constriction or evidence of pressure. You may ask why I applied support if there was no fracture or dislocation? I did it to keep the parts at rest while the patient was being moved to the Hospital, and to satisfy friends and relatives who were looking on. In private practice should you find a severely bruised member and do nothing for it you would be accused of neglect, especially if dealing with an ignorant class as in this instance.

To disprove the accusation that the dressing had anything to do with the paralysis, I will give you the history of a similar case with like result where no dressings whatever were applied.

CASE II. Janury 21st, 1890, I was called to see a patient who was struck by a falling tree. He was brought ten miles from the woods to his home in Big Rapids. I saw the patient four hours after the accident. He was about twenty-five years of age, and had every appearance of previous perfect health. He was suffering from shock, but not quite so severely as case 1. He was struck on left shoulder and back. I found evidence of fracture of 6th and 7th ribs. The skin was not broken but evidence of severe bruising could be seen. Patient expectorated blood and a slight traumatic pneumonia followed. The fractured ribs were strapped, a wide bandage applied around the body and the elbow and forearm supported by a sling. There was some degree of swelling but not so extensive as in case 1. The patient had no control of deltoid or muscles of arm or

forearm, and as there was partial anæsthesia and limited electrical contractility my prognosis was atrophy and permanent paralysis. Feb. 11th, I called in two physicians to examine the case. (This is a very important matter for self-protection.) They thought improvement would follow the use of the faradic current, but it did not. The atrophy and paralysis are as complete as in the first case reported. And this was not the result of tight dressings as no dressings were applied.

There is a case in Big Rapids, in which a man aged 50 years, received a supra-condyloid fracture of the humerus and there followed complete paralysis of forearm and hand. There is no evidence whatever that the treatment was not perfectly proper; there is no displacement of fragments or callus pressing on nerve. I have exhibited these three cases to the members of the Union Medical Society of Northern Michigan.

It has occurred in my experience repeatedly to pass my opinion as an expert on patients with similar conditions. So the cases I have reported are not rare ones. I have always been asked if the doctor who managed the case was not liable for damages. In fact the lawyers informed my first case that if he could get the doctors to swear that I was to blame for the result, it was advisable to bring suit against me. I have seen many cases of traumatic paralysis of the deltoid, and apparent luxation from loss of support. This muscle usually recovers its functions on the application of proper treatment.

Those of you who have had extensive experience with fractured legs have observed many cases of crutch paralysis. Sensation and motion are rapidly restored on dispensing with the crutches and applying a battery.

In 1883, I assisted in cutting down on the musculo-spiral nerve. It was almost covered in a bed of callus after a supra-condyloid fracture. All the parts supplied by this nerve were paralyzed. Sensation and motion were completely restored by chiseling away the callus.

There have been repeated reports of paralysis following the injection of ether; the ether having been injected in the neighborhood of the nerve paralyzed. Alcohol produces the same effect and experimental study shows that the portion of the nerve with which the alcohol comes in contact undergoes necrosis.

Alamertine reports a case of paralysis and atrophy of the muscles of the arm from wound of the hand by a fragment of hot

iron. He considers it a case of reflex muscular atrophy. It is necessary to be very guarded in prognosis, for if the result is not as good as you promise, others will say the bad result is due to lack of skill or carelessness. You will meet with fracture of the humerus far down where the musculo-spiral nerve is so damaged that the extensors and supinators become powerless, and this condition remains permanent.

Cases come under the care of the surgeon often following what at the time appeared to be a trivial injury, such as a prick of a needle or splinter stuck in the finger. The whole arm finally becomes very much wasted from the neuritis.

I could continue with a list of cases embracing other parts of the body, especially the lower extremities. My illustrations are sufficient for thought on traumatic paralysis without extending them.

The particular question I raise is, why should a severe blow upon the shoulder be followed by complete paralysis of the entire limb? It is an injury of the cord, the brachial plexus or is it a simple neuritis?

We have every form of traumatic lesion of nerves with compression, hæmorrhage into, or even rupture, and this may extend to the cord or cerebral centers. From hæmorrhage into the nerve we can get fatty degeneration or degenerative atrophy, or a chronic parenchymatous neuritis.

There is some difficulty in studying the pathological condition in these lesions. Post mortems are rare, and, if made, would seldom be by those competent to make a proper microscopical investigation of the nerves and cord.

I am inclined to consider my two cases a neuritis of the brachial flexus, and the consequent degenerative atrophy.

The prognosis in traumatic paralysis varies according to the intensity of the nerve lesions. If the nerve is completely divided and nutrition markedly affected, the chronicity of the affection will only increase the dangers. The less the electro-muscular contractility and sensibility have been affected, the sooner will electricity produce good results. The prognosis is favorable if contractility is diminished, but sensation has suffered little or not at all. When all phenomena of contraction and sensation are abolished, the paralyzed muscles will be atrophy, even though they respond to the faradic current. Duchenne says, the return of sensibility and the transformation of anæsthesia into hyperæsthesia constitute favorable signs which are indicative of beginning re-

covery; the temperature muscular tonicity, and power of voluntary motion will then gradually return to the normal.

With regard to treatment, if the nerves are ruptured they should be sutured. If there is pressure from dislocation, callus or inflammatory thickening, it should be removed. Friction and massage to stimulate circulation. Electrical treatment plays the most important role. The constant current at first, then the induced current. The effect on the peripheral nerves must depend mainly upon its catalytic action, upon its effects on circulation and nutrition, upon inflammation and its consequences, upon cicatricial tissue, upon cirrhosis and degeneration, the absorption of extravasations and exudations into nerves and nerve sheaths. The faradic treatment is more serviceable and more indicated in old than recent cases. Daily sittings of ten to fifteen minutes. The strength of the current may be gauged approximately by the sensation. The treatment should not be too much prolonged.

The indication for medical treatment will depend on each individual case.

SOME RECENT ADVANCES IN THE TREATMENT OF DISEASES OF THE SKIN. ¹

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The object of this paper is to give a short *résumé* of some recent and important advances that have of late years been made in the treatment of affections of the skin by Dr. Unna, of Hamburg, whose system is fast becoming famous throughout the world. Most of the facts are taken from my own private notes, collected at Dr. Unna's clinic, or from abstracts or translations of articles that have appeared from time to time in the *Monatsshefte für Praktische Dermatologie*, or other journals, the reference to which will be given in each instance.

Rather than enter into any abstract questions regarding the actions of topical applications on the cutaneous surface, rather than attempt to explain on theoretical grounds the "keratolytic" or "keratoplastic" reactions that are set up under certain conditions, I would proceed at once to the practical discussions of the various new methods of applying drugs in affections of the skin; and

¹ From the *New Zealand Med. Jour.*

I would discuss the subject under two headings:—

I.—New forms of application in skin diseases.

II.—Those diseases to which these applications are adapted.

I.—NEW FORMS OF APPLICATION IN SKIN DISEASES.

Since the time of Ferdinand Hebra, no single individual has introduced such extensive reform into the domain of Dermatology as Dr. Unna, of Hamburg. To him we are indebted for much that is new in the histology and in the bacteriology of the skin, and for almost all that is new in the therapeutics of the most extensive sense organ of the body. The improvements that have been made are almost wholly in the direction of topical applications, the chief of which are—(1a) Plaster, (b) Salve Mulls, (2) Glyco-gelatines, (3) Pastes, (4) Soaps (over fatty, etc.), (5) Salve and Paste Pencils.

(1a) Plaster Mulls.

These elegant topical applications are composed of oleate of alum and gutta-percha, with which drugs in varying strengths are incorporated. The oleate of alum constitutes their adhesive element, and possesses the marked advantage over other such applications in that it is absolutely unirritating. The gutta-percha forms an impermeable basis for the drug incorporation, the whole being spread in a thin layer on fine mull or muslin. Almost any drug may be incorporated with the plaster mass, though varying expedients have to be resorted to in order to ensure satisfactory results. No less than eighty varieties are at present prepared by Beiersdorf, of Hamburg. Those chiefly in use are—Mercury, mercury and carbolic acid, mercury and salicylic acid, mercury and zinc oxide, salicylic acid, salicylic acid and cannabis indica, zinc oxide, lead, boracic acid, chrysarobin, and resorcin.

They are applicable in nearly all localized affections—patchy eczemas, psoriasis, lupus, acne rosacea, and acne vulgaris, etc. Their method of application consists in cutting the plaster to the size of the lesion to be treated, and applying it forthwith. Further details as to their use will be discussed under the individual diseases in the next section.

They possess the following advantages over other methods of local application—they are cleanly, readily applied, are in constant contact with the diseased part; they protect from

external irritants, and are comfortable to the patient. They have, therefore, justly come into very general use in the treatment of a large variety of skin diseases.

(b) Salve Mulls.

These preparations differ from the plaster mulls in that they contain neither gutta-percha nor oleate of alum, but consist simply of an ointment mass, spread very accurately and evenly by machinery on mull, or undressed muslin. Those chiefly in use are—Zinc oxide salve mull, zinc oxide ichthyol salve mull, and lead and carbolic acid salve mull.

There is nothing especially new in this form of application, and Unna¹ only claims for it that it is "a neat, convenient, more adaptable, and therefore more efficacious, form of the strips of cloth coated with ointment, which are used by the school of Hebra." It is not claimed for them that they are to replace ointments altogether, but simply that they are elegant, cleanly, and comfortable applications; especially useful in localized eczemas of hands, feet, face, nostrils, external auditory meatus, &c. The mercurial salve mull is especially recommended in cases of hereditary syphilis—it is cleaner and more easily managed than inunction.

(2) Glyco-gelatine.

In recent years, no more useful advance has been made in the treatment of skin diseases than the adoption by Unna of a compound of glycerine and gelatine (glyco-gelatine). Professor Pick, of Prague, was the first who foresaw the utility of these two substances, but he used to apply them separately—a far less convenient method than when in combination. The best basis for the incorporation of all other drugs appears to be the zinc oxide glyco-gelatine,² of which there are two forms (A soft, B hard), composed as follows:

A (Soft).

Zinc oxide,	15 parts
Gelatine,	15 "
Glycerine,	25 "
Water,	45 "
	<hr/>
	100 "

¹ *British Medical Journal*, August 27, 1887.

² *Monatshfte fur Prakt. Dermatologie*, 1887, p. 317. Abstract from *Artaler Vereinsblatt*, 1886, No. 176.

B (HARD).

Zinc oxide,	10 parts
Gelatine,	30 "
Glycerine,	30 "
Water,	30 "
	—
	100 "

Iodide of lead, precipitate, chrysarobin, sulphur, and iodoform, are all miscible in any proportion—5 to 10 per cent. is a suitable proportion for the first three mentioned. 20 to 30 per cent. for the last two. Carbolic acid, salicylic acid, resorcin, naphthol, creosote, and sulphide of potash exercise an inhibitory action on the setting of the gelatine, and should only be incorporated with the Hard variety up to 10 per cent. Fats, balsams, tars, and ichthyol have a diluting and loosening effect, and should be prescribed with the Hard variety, and not in larger proportion than 33 per cent. Substances in powder form may be used, but never in greater quantity than the proportion of gelatine. Camphor and chloral may be incorporated up to 2 per cent., ext. cannabis indica to 5 per cent., hydrarg. perchlor. up to 3 per cent.

The method of application to diseased parts is excessively simple. The solid glyco-gelatine is melted in a hot water bath. It is then applied with a paint brush to the affected region, and dabbed over immediately afterwards with a roll of absorbent cotton wool; thus a sort of skin is formed, which acts as a protector, and as a medium by which the medicaments may be kept in constant contact with the skin. Besides this, it acts beneficially by its slight compressing effects, producing a localized anemia, also favoring the absorption of inflammatory products.

Indications for application—

(a) Pruritis, both simple and senile, if uncomplicated.

(b) Artificial dermatitis, produced by free use of mercurial ointments, alcoholic inunctions, irritation from chrysarobin, salicylic acid, resorcin, &c.

(c) Erythema and rhagades, which disappear very quickly.

(d) Acute and localized eczema, when not weeping.

(e) Pruritic eczemas (the ichthyol 2 per cent., or cannabis indica 5 per cent., zinc glyco-gelatine.)

(f) Inflammatory acne. (In some cases a 20 per cent. sulphur, or 5 to 10 per cent. resorcin, zinc gelatine acts admirably.)

Besides the above indications, zinc glyco-

gelatine is very useful as an adjuvant in the treatment of lupus, tinea tonsurans, &c. It is also an excellent fixing agent in the use of the plaster and salve mulla. For efficacy, cleanliness, and comfort, glyco-gelatines cannot in selected cases be equalled by any other method of topical application.

(3) Pastes.¹

These preparations, though not introduced by Unna, have been largely augmented and elaborated by him.

The conditions which a well-made paste should fulfil are—that it can be easily and rapidly spread over the surface in a thin layer, it must dry rapidly, and leave behind a closely adherent coating.

Bolus alb. (kaolin), starch, dextrin, and gum, each have their advocates as bases in the preparation of the pastes—

Bolus Paste.—R. Boli alb. 2, ol. lini. 1 Misce. Ft. pasta. An excellent foundation. If more ol. lini. be added, a liniment is formed, which leaves a coating on the skin after drying. A good eczema paste is made by adding oxide of zinc and liq. plumbi, thus—R. Boli alb. 3, zinci oxidi 2, ol. lini. 3, liq. plumbi 2. In making the foregoing, the bolus and oil must be mixed before adding the other medicaments, else decomposition will result.

Starch Paste.—R. Amyli 3, glycerini 2, aquæ 15. To be boiled down to 15 parts. To this foundation half or more of their volume of powdered medicament may be added. If, however, more than half the bulk is to be added, then the quantity of glycerine is to be increased in proportion—R. Zinci oxidi 50, acidi salicyl. 2, amyli 15, glycerini 15, aquæ 75. Mix, and boil down to 140 parts; an excellent starch paste in the treatment of eczema.

Dextrin Paste.—The foundation consists of dextrin, glycerine and water in equal proportions. To the foregoing oxide of zinc, &c., may be added as necessary.

Gum Pastes.—The basis consists of one part of mucilage of gum arabic and one part of glycerine, to which two parts of a powder, as oxide of zinc, are added. Carbolic acid, salicylic acid, &c., may be incorporated thus—R. Zinci oxidi 50, acidi carbolici a 2 muc. gummi arabici, glycerini a 25. Ft. pasta.

Sulphur may be mixed with the starch, dextrin, and gum pastes. Results are not so satisfactory when mixed with bolus paste. Ichthyol salts are miscible with all the pastes except gum.

¹ Monatshefte für Prakt. Dermatologie, 1884, p. 88.

Tar best in starch, dextrin or gum pastes.

Naphthol, carbolic acid, chloral hydrate, camphor, salicylic acid, sublimate, calomel, red and white precipitate may be mixed with all the varieties.

Iodine, iodoform, chrysarobin, pyragallol, are best suited to the bolus and gum pastes. Fats and soaps may be added to any variety, but only in small quantities.

(4) Soaps.¹

Over-Fatty Soap.—This soap is used as a basis (Grundseife) for the incorporation of all drugs which enter into the formation of the medicated soaps. In its simple non-medicated form, it is an excellent preparation for ordinary toilet purposes, especially adapted for patients whose skins are irritable, or have a tendency to become dry and chapped. It is produced by the addition of two parts of soda and one of potash lye to ordinary beef suet. To this mixture olive oil, about 4 per cent. in excess of that required for saponification, is added, and thus the super-fatty condition is determined.

Over-Fatty Marble Soap.—Consists of super-fatty basis soap, to which 20 per cent. of marble dust is added. Its action on parakeratoses and acne is not medicinal, but simply mechanical.

Ichthyol Soap.—Indicated in rosacea and dry eczemas, is produced by adding 10 per cent. of ichthyol to the over-fatty basis soap.

Salicylate Soap.—Prepared like ichthyol soap, and indicated in subacute and chronic eczemas, in acne vulgaris, and in mycotic affections, tinea tonsurans, &c.

Zinc Soap has a drying action on the skin, and is useful in seborrhoea oleosa, hyperidrosis, and bromidrosis.

Perchloride of mercury, tannate of soda, tar, sulphur, camphor, iodide of potash, and naphthol may all be incorporated with the over-fatty basis soap, and form useful adjuncts to treatment.

(5) Salve and Paste Sticks.²

These preparations, as their names imply, are composed of two essentially different bases—(a) The salve sticks, or pencils, contain fatty elements as the bulk of their ingredients, which are insoluble in water; (b) the paste sticks, or pencils, contain non-fatty elements, which are easily dissolved by the aid of moisture.

The first variety (salve sticks) is useful when it is desirable to leave a thin layer of some drug on the fat-covered epidermis of the skin, as in dry eczemas, psoriasis, &c., for ordinary non-fatty solutions would not mix with the oleaginous excretions lying on the surface of the epidermis, hence the medicament could not come into intimate contact with the diseased surface. These pencils are prepared about the thickness of the little finger, and about the consistency of an ordinary cosmetic stick. The latter property is obtained by a judicious combination of olive oil and wax, to which the requisite drug may be added in varying quantities.

If very heavy drugs, as mercury, are to be incorporated, then some suspensory element, such as oil soap, must be added, thus—

Sublimate Salve Pencil (10 per cent.)—Sublimate 10 parts, oil soap 20, pine resin, 5, wax 35, olive oil 30.

The coherence of the mass is materially increased by the addition of ordinary resin, or, if creasote is used, then olibanum resin is best, thus—

Creasote Salve Pencil (10 per cent.)—Creasote 10 parts, olibanum resin 20, olive oil 30, wax 40.

The second variety (paste pencil) is indicated when the epidermis is absent, and there is moisture present to dissolve the elements of the pencil, and no fatty excretion to prevent intimate contact of the medicament with the diseased surface. Thus, these pencils are especially useful in the application of topical remedies to such conditions as chancres (hard or soft), condylomata, ulcers of the mucous membrane of the mouth, nose, conjunctiva, &c.; also in ulcerating or non-ulcerating lupus. In the latter, the sharpened point of the pencil is to be bored into the soft lupus nodule, thus destroying the affected tissue by both mechanical and therapeutic measures, since a coating of the distinctive drug is left in close contact with any diseased tissue that may remain round the walls of the cavity produced by mechanical means.

These pencils consist of short sticks, very brittle, and about the thickness of a slate pencil. They may be sharpened at the point, or not, as necessary. Their basis consists of starch, sugar, dextrin, or gum arabic, and tragacanth, thus—

Iodoform Paste Pencil (40 per cent.)—Iodoform 40 parts, tragacanth 5, starch 10, dextrin 30, white sugar 15.

Cocaine Paste Pencil (5 per cent.)—Cocaine 5 parts, tragacanth 5, starch 35, dextrin 35, white sugar 20.

¹ *Monatshfte fur Prakt. Dermatologie* (Digest), and Volkmann's "Sammlung Klinischer Vorträge," No. 252.

² *Monatshfte fur Prakt. Dermatologie* '86, p. 157.

These preparations, besides being cleanly and convenient when applied by a medical man, are especially adapted for application by patients themselves, who may without inconvenience carry them in their pockets, and apply them at intervals during the day.

II.—THE DISEASES TO WHICH THESE APPLICATIONS ARE ADAPTED.¹

Before proceeding to discuss the second part of this subject, *i. e.*, those diseases to which the methods of application described in Part I. are adapted, it will be necessary to briefly explain a term—eczema seborrhoicum—which is now in frequent use in dermatological phraseology, and which originated with Dr. Unna.

Clinically, the condition which, according to Unna,² arises from a perverted condition of the sweat glands, which secrete fatty as well as watery products, presents the following characteristics—

(1) "Eczema seborrhoicum almost invariably starts upon the hairy scalp as a latent catarrh, the first traces being the sticking together of the horny layers, sensible exfoliation of scales, abnormal distribution of oily matter, and drying of the hair, through blocking of the mouths of the follicles.

(2) "It has a remarkable predilection for certain positions, which are—Scalp, forehead at junction with hairy scalp, temples, ears, nose, corona around mouth, sternum, axillæ, arms (flexor surfaces), abdomen, chest, back, legs, hands and feet, intertrigo positions, and buttocks.

(3) "It usually spreads from the scalp downwards, over the temples and ears to neck, sternum, axillæ, &c., and assumes one of three forms—(a) As a progressive slight scaliness of scalp (pityriasis capitis), with progressive alopecia (alopecia pityrioides) scaly form. (b) As a progressive baldness, with heaping-up of scales on the scalp, and of a corona seborrhoicum at the junction of the forehead with the hairy scalp, spreading to the temples and ears, or skipping over to regions of the nose and cheeks, particularly apt to occur on the sternum—the crusty form. (c) The moist form, in which weeping occurs, is especially apt to attack the temporal regions and ears, the fatty scales are lost, and the part looks red, moist and shining. The lesions most typical of eczema seborrhoicum are—circular or oval red

patches of the size of a finger-nail, fading in the centre, the red color of which is masked by a covering of the yellowish crumbling scales. The margin consists of prominent red papules. Groups of such patches or rings form and coalesce with one another, till a festooned figure is formed. It is characteristic of eczema seborrhoicum that it tends to assume certain forms in certain parts of the body, *e. g.*, the scaly form on the scalp and face, the moist in the axillæ, temples, ears, back of hands and fingers, and in intertrigo positions; the crusty form on the trunk. On the palms and soles it resembles psoriasis guttata, and passes into a peeling condition, but does not weep. The scaly and crusty forms which occur in the beard or moustache are not accompanied by falling out of the hair. On the nose, forehead, and cheeks red papulus, with congestion, may prevail, with pityriasis capitis, and unless cured, passes into acne rosacea. The nails are seldom attacked."

It will thus be seen that many conditions are included under the above name, which were formerly described as varieties of ordinary eczema and psoriasis. With the following exceptions, all cases once so described are now placed by Unna in his class, seborrhic eczema:—

(1) Eczema papulosum, *i. e.* those cases of eczema in which papules constitute the morbid change in the skin, which with great rarity go on to vesiculation.

(2) Eczema nervosum, which is produced by nervous tension of any sort in neurotic individuals.

(3) Eczema pruriginosum.

(4) Eczema tuberculosum, or scrofulous eczema, which occurs in scrofulous children, is very obstinate, is often accompanied by conjunctivitis, otitis, etc., and generally begins on the face, and extends from above downwards to other parts.

(5) Eczema folliculorum, that form of eczema which appears as grouped papules, affecting the hair follicles.

(6) Psoriasis.—No case is regarded as one of true psoriasis, unless the patches appear in typical positions (elbows and knees), and unless the scales are typically silvery in appearance, without admixture of greasy elements. Many cases which are now recognized as generalized psoriasis, especially of the guttata variety, would thus be excluded, and would be classed as an eczema seborrhoicum.

TREATMENT.

There is a large class of remedies which

¹Only the more common diseases have been selected, and it is impossible in a short paper to give more than the bare indications in each case.

²"Year Book of Treatment," 1889.

act almost like specifics—resorcin, ichthyol, chrysarobin, pyrogallyl, and sulphur, especially the latter. They be applied as ointments, paste mulls, or sprays.

Unna insists on the condition known as dry seborrhœa of the scalp, or pityriasis capitis, being really an eczema seborrhoicum, having its origin in derangement of the sweat apparatus. He traces the origin of eczema seborrhoicum of the face and body to past or present seborrhœa of the scalp, and thus whenever it exists he treats it very vigorously.

Eczema Seborrhoicum of Scalp (Pityriasis Capitis, Dry Seborrhœa.)

- (1) Wash the head every morning with spiritus kalinus of Hebra.
- (2) After drying, take an ointment containing sulphur 2 to 3 per cent., resorcin 2 per cent., and apply it very thoroughly to all parts of the head. Apply again at night, and wash it off with spiritus kalinus in the morning. This treatment should be kept up, but with diminishing vigor, for four weeks or more.

If the hair is dark in color, the following is a very excellent application:—R. resorcini 5, ichthyolis 5, acidi salicylici 1, vaselini 88. Ft. unguentum. If the condition is very slight, then a resorcin spray (resorcin 5, spirit 100,) is quite sufficient.

Ears, Neck, and Face.

If non-weeping.—Zinc glyco-gelatine, to which ichthyol 2 per cent. has been added. The gelatine exerts a slight pressure on any edema present; the ichthyol controls the hyperæmic and inflammatory condition, and relieves itching.

If weeping.—use pasta zinci (Unna's paste)—R. zinci oxidi 10; terra silicæ 10, vaselini 75. Ft. paste, et adde sulphur, 5 per cent.

If crusted.—Having got rid of crusts, apply zinc sulphur salve mull. When the process is very acute, with much itching and burning, watery solutions of resorcin act well—R. resorcini 10, glycerini 10, spiritus 10, aquæ 70. Ft. lotion. To be mixed with water in proportions of five, four, three, two, or one, to one of lotion, according to the acuteness of the condition.

Anterior Nares and External Auditory Meatus.

A very excellent application consists of the yellow or red oxide of mercury salve mull, which is easily applied to the affected surface by making a roll of it, with about an inch projecting from the nares and meatus.

The projecting portion is slit into small flaps, which are turned back and held in position by adhesive plaster.

Chronic Eczema Seborrhoicum about the face or extremities is often very satisfactorily treated with resorcin wet dressing,¹ which is applied thus:—A piece of lint is well moistened with a solution of resorcin of the necessary strength, and applied to the affected region; it is covered with an impermeable sheet of gutta-percha and fastened in its place by a bandage. The contained moisture produces swelling of the horny layer, and prevents penetration of the normal fats of the skin, thus rendering it more permeable to the drug. The impermeable covering acts also as a soothing and slight anæmic-producing agent. If this method is unsuccessful, then try resorcin or pyrogallol as an ointment—R. resorcini 5, ichthyolis 5, acidi salicylici 2, vaselini 88. Ft. unguentum—on the scalp and face, and uncovered parts; however, it is advisable to use resorcin without ichthyol, as the latter discolors the hair and the skin. R. Pyrogallolis 5, ichthyolis 5, acidi salicylici 2, vaselini 88. Ft. unguentum.

Chrysarobin is very efficacious, but must never be used on the face, on account of its tendency to produce severe conjunctivitis. Plaster mulls of pyrogallol or resorcin, 1 to 10 per cent., may be used with advantage on small, inveterate spots.

Eczema Seborrhoicum of Scrotum and Anus.

In this position the affection is often excessively rebellious to treatment. Ichthyol asphalt, however, has a very excellent effect on many cases, causing marked subsidence of the inflammatory condition, and a very decided diminution of the accompanying pruritus. If all other remedies fail—resorcin, pyrogallol, tar, ichthyol, etc.,—then resort may be had to Paquelin's cautery. The whole infiltrated surface of skin is seared with a flat blade, especially made for the purpose. The wound may be dressed with iodoform, and when it has healed, may be treated with ordinary remedies, which will probably effect a complete cure. If much intertrigo of scrotum and anus present, the resorcin wet dressing should be used first. If this produces no beneficial effect, paint on a 30 or 40 per cent. solution of ichthyol, and cover it with glyco-gelatine. If there is much moisture about the parts, the gelatine must be dispensed with, as it would undergo solution.

¹ Monatshefte für Prak. Dermatologie, 1889, p. 44.

Psoriasis.

A very large majority of the cases now designated psoriasis, are called by Unna, *eczema seborrhoicum*. These cases must be treated according to the directions given when discussing the treatment of that affection. The treatment of true psoriasis differs very little from that at present followed by the majority of dermatologists. The scales are to be got rid of by the use of soft soap and a hot bath; or if there is much infiltration on the patches, the plaques may be removed surgically. Afterwards chrysarobin, pyrogallon, resorcin, or sulphur, must be used freely. Arsenic may be given internally.

*Acne Vulgaris.*¹

The pathological process, which culminates in the formation of acne papules, is divided by Unna into two stages—

(1) The blocking of the mouth of the follicle, and comedone formation.

(2) Inoculation with pus cocci, and consequent inflammation and suppuration.

The first part of the process is brought about by an abnormally firm cohesion of the layers of the horny stratum of the skin; this, accompanied by absence of the desquamation, naturally blocks the mouth of the follicle. The duct also becomes blocked by a continuation of the "parakeratosis," thus producing a comedone. The second part of process, i.e., inflammation, occurs only in those ducts that have been inoculated by pus cocci previous to the blocking of the follicle.

The indications for treatment are, therefore, as pointed out by Unna—

(1) To loosen the horny layer of the epidermis.

(2) To kill the pus cocci.

The first indication is fulfilled by the use of strong "keratolytic" remedies—poultices, salves, or pastes, containing green soap—brushing with 5 per cent. liq. potassæ, or acetic acid, or salicylic acid plaster mulls. Sulphur, resorcin, and perchloride of mercury, however, fulfil both indications, as they are keratolytic, as well as antiseptic.

To commence with, patient must wash his face at night with hot water and soap (Hebra's soap spirit, marble or sublimate soap.) He must then apply a paste of sulphur, or resorcin, allowing it to remain on all night, and washing it off in the morning. During the day, a resorcin or sublimate spirit is more conveniently applied—

Resorcin Paste (for nocturnal use)—R. resorcini 10, terræ silicæ 10, ung. zinci benzoate 80.

Sublimate spirit (for daily application)—R. hydrarg. perchloridi 1, glycerini 1.0 aq. aurantii floris 20.0, spiritus 80.0

To prevent relapses, a weak resorcin paste or spirit must be applied for a lengthy period. During the above medicinal treatment, it is important to carry out mechanical treatment, by frequently evacuating the follicles of contents by compression, and by giving exit to pent-up inflammatory products.

*Rosacea (Acne Rosacea).*²

There is no necessary connection between acne and rosacea, though it is true acne is often a complication of rosacea, but the reverse does not hold good. From an extended experience, Unna has come to the conclusion that about 80 per cent. of rosacea cases are associated with *eczema seborrhoicum*. He therefore separates rosacea into two classes—the one associated *eczema seborrhoicum*, the other idiopathic, or unassociated with a seborrhoic condition.

The cure of the first variety depends on the successful treatment of the *eczema seborrhoicum* and *pityriasis capitis*; whilst that exists, there is always a tendency to return of the disease.

The second variety is best treated by ichthyol, both internally and externally. Internally, in the form of pill, one to two grammes per diem; externally, to be applied as an aqueous solution at night, or better perhaps, the following paste:—R. ung. zinci 20, pulv. oryzæ 4, sulph. 2. Ft. pasta.

In a later stage of the disease, when the vessels become permanently dilated, the parts must be treated with a very marked preparation of resorcin (50 per cent.), which sets up a very strong keratolytic process. After this, the individual vessels must be slit up with a Hebra's lancet, or be cauterized with Unna's modification of Paquelin. If there is much irritation of the face, it must be covered with a glyco-gelatin mask, which also helps to detach the horny layer.

The early and mild form of the third stage, i.e., the stage of connective tissue development, may be treated like the second stage; but if the rhinopymatous development becomes very marked, then there is nothing left in the way of treatment but deep scarification, or ablation. To remove the yellowish stain which is frequently left on the face

¹ Monatshefte für Prakt. Dermatologie, 1888, p. 54.

² Monatshefte für Prakt. Dermatologie, 1888, p. 112.

after the disappearance of rosacea, use the following once a day:—R. biamuthi oxychlor. 20, hydrarg. perchlor. 0.1, vaselini 20.

Sycosis.

Two varieties of sycosis are usually recognized—the parasitic and non-parasitic forms—the former being due to inoculation of the hair and hair follicles with trycophyton fungus; the latter, to inoculation with one of the pus-producing cocci; hence the latter is no less parasitic than the former. Unna would therefore substitute the terms hypophogenic (parasitic) and coccogenic (non-parasitic), sycosis.

The diagnosis between these two forms is clearly set forth in all text-books on diseases of the skin. It is not, therefore, necessary to discuss the subject here. Having recognized the variety, it will be necessary to treat it accordingly.

*Hypophogenic Sycosis.*¹

(a) In the superficial variety, if the beard is not shaved, use an ointment consisting of resorcin 10 per cent., and hydrarg. perchlor. 1 per cent., to be rubbed in night and morning. If hair is shaved use the following:—R. resorcini 2, hydrarg. perchloridi .05, terree silicee 10, ung. zinci 90. Ft. pasta.

In these cases the salve sticks are very useful. Sublimate salve stick, or resorcin salve stick, to be used twice daily. As an adjunct, the resorcin spirit spray is to be recommended—R. resorcini 5 parts, hydrarg. perchloridi .01 to .05, ol. ricini 1.0, aq. cologniensis, spiritus a 50. Misce.

(b) The deeper nodular variety is best treated with plaster mulls. The beard must be shaved, then a mull of mercury and carbolic acid is to be applied, and fastened on with zinc glyco-gelatine. Under this treatment, some nodules undergo rapid resolution, others suppurate painlessly, and with but little loss of tissue. Warm fomentations and epilations are valuable adjuncts to the treatment.

*Coccogenic Sycosis.*²

Having shaved the beard, patient must wear a plaster mull of mercury and carbolic acid, or of resorcin, during the day. The suppurating follicles are to be epilated, and touched with a 5 per cent. resorcin spirit. The following drugs may be applied as salves or 2 to 5 per cent. wet dressing at night time—Resorcin pyrogallol, chrysarobin, sul-

phur, or ichthyol; the latter is especially useful as a 10 per cent. wet dressing.

If patient objects to shaving, the superficial follicles must be regularly epilated, and then smeared with a salve of oxide of zinc and sulphur, or resorcin and sublimate. Scarification is not to be recommended, as it leads to fresh inoculation of cocci. Epilation is to be practiced on the follicles which are affected superficially, in order to allow of their more easy disinfection with antiseptics. When the affection is cured, fresh outbreaks must be guarded against by the destruction of newly arising postules by epilation, and cauterization with a pointed sublimate paste pencil, and by subsequent use of weak resorcin or sublimate applications.

Lichen Planus.

The remedy which exercises the most beneficial effects on this troublesome form of skin disease, is the perchloride of mercury. It may be applied in various ways. The following ointment, with which carbolic acid is incorporated, acts very effectively, dispersing the papules, and controlling the pruritus, which occasionally is almost intolerable:—R. hydrarg. perchloridi 1, acidi carbolicci 20, vaselini 80. Ft. unguentum.

A good method is to apply the perchloride in collodion and spirit, which is to be brushed over each individual papule at first daily, and then three times a week—R. collodion 20, spiritus 20, hydrarg. perchloridi 2.

The administration of arsenic forms also an important part of the treatment of lichen planus.

*Lupus Vulgaris.*³

The treatment of this section has for its object the total destruction of the tubercular lesions which are situated in the cutis vera. With this object the curette or Paquelin's cautery must be freely used. The latter is preferred by Unna, since the micro-organism of the disease is less likely to develop afresh in the tissue that is wholly destroyed by the cautery, than it is in the raw surfaces left by the sharp curette. Also, a firmer cicatrix is produced by the cautery.

Having then, whilst the patient is under chloroform, thoroughly destroyed all the nodules of lupus tissue, the raw surface must be rendered quite aseptic by application of the following:—R. spiritus ætheris 80, acidi carbolicci 16, hydrarg. perchloridi 4. The next step is the application of salicylic, creasote, or salicylic quaiacol plaster mull, whilst the patient is still under chloroform. The plaster

¹ *Monatshfte fur Prakt. Dermatologie*, 1888, p. 345.

² *Monatshfte fur Prakt. Dermatologie* 1888, p. 555.

³ *Monatshfte fur Prakt. Dermatologie*, 1889, p. 337

is to be cut a shade larger than the affected surface, and to be fixed in its place by zinc glyco-gelatine.

The plaster mull must be renewed every day; but before replacing the new one, the raw surface must be cocaineized, and any nodules of lupus tissue that can be found undestroyed by the cautery, must be bored out with a sharp-pointed sublimate paste pencil (10 per cent.) The sublimate pencil is then smeared freely over the whole surface, and the new plaster mull is adapted as at the first dressing. If the salicylic plaster mull is not obtainable, the following, spread on a double layer of gauze, may be substituted—R. acidi salicylici 20, creasote 40, cerati 40. Ft. pasta.—*Australian Medical Journal.*

SELECTED FORMULÆ.

PISTOIA POWDER.

There is a powder made in a convent near Pistoia, Italy, and it is used very extensively as a protective against gout. The following is said by Mr. Chastaing to be its composition:

R	Bryonia root,	
	Gentian,	
	Chamomile, aa.....	grammes x.
	Colchicum root.....	" xx.
	Betony.....	" l.

This is made into 365 powders, one of which is taken each day of the year in a full glass of cold or hot water.—*Medical Record.*

SANTAL OIL FOR COUGH.

Curtin (*Philada. Hosp. Rep.*) finds that sandal wood oil often gives relief to the cough in phthisis, catarrhal pneumonia, chronic bronchitis, with asthma and influenza. It is given on sugar or floated on water.

TREATMENT OF CONDYLOMATA.

Dr. G. Finco (*Gazetta Medica Lombarda*) recommends the following in the treatment of condylomata:

R	Collodion.....	grammes 2.00.
	Mercur corrosiv.....	" 0.02.

The collodion should be poured into a small cup, the corrosive sublimate added, and the whole well shaken, as the sublimate does not dissolve in collodion.

The largest condylomata may be touched with a small brush dipped into the mixture following this with the local application of cold water. On the following days the others may be treated until all are removed.

THE CLINICAL VALUE OF THE DIAZO-REACTION.

The following solutions are necessary to make the diazoreaction:

A.		
R	Sulphanile acid.....	gtt. lxxv.
	Muriatic acid.....	fiss.
	Distilled water.....	f 3xxx.
B.		
R	Nitrite of sodium.....	gr. viij.
	Water.....	f iij.

When ready for use 75 drops of solution B are to be added to 8 ounces of solution A, and this reagent should be prepared fresh for every test. Then to equal parts of the reagent and urine, $\frac{1}{2}$ volume of ammonia is added, and shaken up. In certain febrile diseases the fluid turns red, which is especially noticeable in the foam. This reaction is observed in typhoid fever, as well as in severe cases of phthisis, pneumonia and measles. Dr. Victor Grosstern (*Gazeta tekarskb*) formulates the following conclusions derived from this reaction in pulmonary tuberculosis and typhoid fever: 1. In pulmonary tuberculosis the intensity of the reaction is an index to the severity of the affection, and always means an unfavorable prognosis. 2. The reaction is always present in miliary tuberculosis. 3. The diazoreaction taken in connection with splenic enlargement and the roseolar eruption is one of the earliest symptoms of typhoid fever. 4. The diazoreaction is never present in febrile intestinal catarrh. 5. The course of the fever and the various methods of treatment have no influence on the reaction in typhoid fever. 6. The disappearance of the reaction in the second and third week of the disease indicates an early crisis; whereas, if the reaction persists, the typhoid fever will be long continued and severe. 7. Relapses are attended with a recurrence of the reaction.—*Wiener med. Presse*, April 19, 1891.

OPIUM SMOKING IN PHTHISIS.

Dill (*Lancet*) has obtained great improvement in several cases of phthisis by giving the patient tobacco to smoke which has been steeped in a solution of opium. In no case were any bad effects from the opium noticed.

FORMULÆ FOR GOUT.

The following (*Hygiea*, No. 3, 1891) is recommended as a local application in gout:

R	Collodii.....	grammes 5.
	Æther sulphur.....	" 5.
	Acid salicyl.....	" 4.
	Morph. sulph.....	gramme 1.

M. S. Apply locally with a camel's-hair brush every hour.

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

MASSAGE IN SURGERY.

Massage has undergone serious and conscientious trials and has apparently been equal to the test in the various domains of the healing art. Unlike hypnotism, the elixir of Brown-Sequard, the ill-fated treatment of Koch, etc., massage has not revolutionized the ideas of that profession which is ever eager to grasp whatever serves to cure or even alleviate human suffering, although probably more real benefit has been derived from this simple manual procedure than from the more pretentious remedies mentioned.

While massage should not be looked upon as the great panacea of the modern practice of physic, nor does it pretend to be, there is sufficient clinical evidence to show that it has produced gratifying results in the treatment of medical, surgical and gynecological cases. Of late, it has been largely used in surgery, and many are the reported instances in which even permanent good has been obtained.

In reviewing this subject, Gilles asserts that massage has effected cures in cases of articular disease, in lumbago, in luxations, syphilitic and blenorrhagic arthritis, in acute and chronic epididymitis, in acute and chronic myositis, torticollis, muscular contractions, muscular atrophy, and muscular paralysis. We can easily understand how in many of these cases massage was effective. For instance, the active and passive movements of muscular massage act favorably on arthritis, and the continuous treatment of this affection, would undoubtedly tend to arrest the invading progress of atrophy. The same may be said of muscular contractions and paralysis. In other instances of a similar nature, suspension, which may be looked upon as an indirect massage, was applied. It seemed to give the best results. Be this as it may, this procedure is a violent one and should be modified. But we cannot yet understand, much less explain, how massage can act favorably, as reported, in cases of infectious diseases of the joints, such, for example, as syphilitic and blenorrhagic arthritis.

In this connection we may refer to a research of J. R. Kappeler, (*Fort. der Med.* Apr. 1, 1890.) This investigator has endeavored to determine whether through massage, pathogenic micro-organisms can be removed by means of the lymphatic glands from the seat of infection, and whether such removal could be effected before any specific action of the bacteria became manifested at the seat of inoculation. It was likewise the object of the experimenter to determine whether the organisms thus treated perished or still retained their specific properties. The experiments were made with the *staphylococcus aureus*, of which an artificial pure culture was employed. The seat of inoculation was the knee-joints of rabbits. After the injection the joint was rubbed for seven minutes, the operation being repeated after half an hour. It was afterwards continued for several days, twice daily, and for fully ten minutes during each operation. After many careful experiments the observer found that both joints in which were and in those which were not rubbed, an effusion of pus occurred, by the fourth day, and continued to increase slightly for a day or two and then stopped. The pus was yellow and creamy and contained the *staphylococcus* which retained its vitality and specific power even when left in the joint for a period of a hundred and twenty days. Severe diarrhoea in all cases, and pneumonia in a few instances, occurred. No disease was found in the long bones or other joints in any of the animals experimented upon. In many of them, however, secondary abscesses of the kidney and liver were observed conjointly, and the *staphylococcus* could be cultivated from the pus of the joint subjected to massage as well as from that which had been left at rest.

These and other results, all of which were of a negative character, simply appear to show that massage alone is incapable of removing a specific pyogenic germ (*staphylococcus pyogenes paureus*) from the knee-joint by means of the lymphatic vessels.

It is true that in such cases as these massage appears to exercise no serious deleterious influence; but it cannot be inferred from

this that the process would be harmless if applied to more vascular seats of inoculation. It is, however, probable that the removal of bacteria might be hastened by massage in places where the effusion of leucocytes might not be sufficient to block the lymphatic vessels.

Notwithstanding the above facts, massage has produced gratifying results in the treatment of a variety of surgical cases, and we cannot but admit its undoubted usefulness in many instances especially where other measures have entirely failed. Thus Douglas Graham (*St. Louis Medical and Surgical Journal*, July, 1890) who has made a critical study of massage in surgery, and who has published some interesting statistics, asserts that cases of sprains got well in one-third the time under massage than without it, and with less tendency to subsequent pain, weakness and stiffness. Many French surgeons, notably Championnier and Rafin, have treated fractures by means of massage, and usually with the best results. In such cases the movements promoted the absorption of effused products, prevented the stiffness of joints, and the atrophy of muscles, and generally hastened the repair of tissues. Rafin has seen recovery take place in 13, 22 and 12 days respectively, in three cases of fracture of the fibula; in two of fracture of the radius in 19 and 20 days; in a double fracture of the ulna in 27; in a fracture of the external condyle of the humerus of a child, in 9 days; in a fracture of both malleoli in a child, in 15 days; in another fracture of both malleoli, with subluxation of foot outwards and backwards, in an adult, in 40 days. Recoveries from transverse fractures of the patella have been observed by Tilanus of Amsterdam, under massage and early movements of the joints. Six patients treated by this author, could walk very well in the course of fourteen days. The same results were obtained in five cases of the same nature, according to Wagner of the Austrian Army, and in which even the application of bandages was dispensed with. In all these latter cases, the effusion being quickly dispelled, both atrophy and stiffness

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were prevented. Three cases of relaxation of ligaments in which the most excellent effects were produced by massage are reported by Graham himself. In all of them the paralyzed muscles, from want of use, and which were unable to extend the affected leg at all, could, in a few weeks, hold it fully and voluntarily for seven, nine and ten minutes respectively. The first case was one of a lady who had the remains of an old synovitis. The second was that of a man, 63 years of age, with a rheumatismal arthritis of the left knee which had developed as a result of an injury. The third case was that of a woman suffering from relaxation of the quadriceps extensor, which allowed the patella to slip externally without power, voluntary or involuntary, of replacement.

If all these results be correct as reported, certainly massage is a remedial measure of no inferior value in surgical practice; but here, more so than in the treatment of medical cases, extreme care should be exercised in its application, lest the doors of a sacred sanctuary be opened to a reckless and evil-producing charlatanism.

PERISCOPE.

THERAPEUTICS.

ON RESCUING DROWNING PERSONS.

The following directions to swimmers for rescuing drowning persons are given by Herr Tetens, President of the Seaman's Society in Hamburg:

1. When you approach a drowning person, call to him in a loud voice that he shall be saved.

2. Before springing into the water, undress as completely and as rapidly as possible. Tear the clothes off if necessary; at any rate, loosen the drawers below if they are bound about the ankles, else they fill with water and hold back the swimmer.

3. Do not touch the drowning person so long as he still struggles strongly in the water; wait a few seconds until he becomes quiet. It is foolhardiness to touch any one while he struggles with the waves, and he who does this subjects himself to much danger.

4. When the unfortunate is still, seize him by the hair of the head; throw him as quickly as possible upon his back, and give him a push to hold him up. Then throw yourself upon your own back and swim thus for land, meanwhile holding with both hands the drowning person by the hair—of course with face upward and his head resting upon your own body. In this way one reaches land more quickly and surely, and a skilful swimmer may even keep two or three persons above water. A great advantage of this expedient is that the rescuer is in the most favorable position for keeping his own head as well as that of the unfortunate above water. One can also remain in this position a long while, which is of importance when obliged to wait for a boat.

5. The "death-grip," practically, is a thing of rare occurrence. As soon as a person becomes weak and begins to lose his senses, his grip becomes weaker, and his hand at last completely loses its hold. He, therefore, who has an idea of saving a person by swimming, need have no fear of the "death-grip."

6. If the person has sunk before he could be reached, the location of the body will be very accurately indicated by the bubbles which rise to the surface now and then. In flowing water which prevents the perpendicular rising of bubbles, allowance must of course be made for the direction and the rapidity of the current.

7. In diving after a body, it should be seized by the hair with only one hand, while the other hand and the feet are used in regaining the surface.

8. In salt water when the current sets from the land, as when the tide is going out, it is a mistake to struggle to reach land. One should rather throw himself upon his back, whether alone or encumbered, and await help from the shore. Many persons perish by exhausting themselves in vain attempts at swimming against the current, when they might have thrown themselves upon their back and awaited help from shore.

9. These rules are applicable in all cases, whether in still water or in the roughest sea.—*Schweiz. Blatter f. Gesundh.*

VACCINATION IN WHOOPING-COUGH.

Dr. Cachoza (*Norsk Magazin for Lægevidenskab*, No. 5, 1891), after an accidental observation of improvement in a child with whooping-cough after vaccination, vaccinated five children, of which four were very severely attacked, having spasms, vomiting

and hæmorrhages from the nose and mouth. After vaccination and the consequent fever the scene was entirely altered; the cough ceased to be spasmodic and entirely disappeared after eight or ten days. Inhalations of a 1 per cent. carbolic acid solution completed the treatment necessary.

AVOIDANCE OF STIMULANTS DURING HÆMORRHAGE.

It is customary, when the accident of hæmorrhage occurs, for the operator, or some by-stander, to administer wine, brandy, or some other alcoholic stimulant to the patient, under the false idea of sustaining the vital power. It is my solemn duty to protest against this practice on the strictest and purest scientific grounds. The action of alcohol, under such circumstances, is injurious all around. It excites the patient, and renders him or her nervous and restless. It relaxes the arteries, and favors the escape of blood through the divided structures. Entering the circulation in a diluted state, it acts after the manner of a salt in destroying the coagulating quality of the blood; and, above all other mischiefs, it increases the action of the heart, stimulating it to throw out more blood through the divided vessels. These are all serious mischiefs, but the last named is the worst. In hæmorrhage the very key-stone of success lies so much in quietness of the circulation that actual failure of the heart, up to faintness, is an advantage, for it brings the blood at the bleeding-point to a standstill, enables it to clot firmly, when it has that tendency, and forms the most effective possible check upon the flow from the vessels. Dr. Richardson (*Æsclepiad*, No. 29, 1891), refers to a case in which three pounds of blood was lost and the patient was unconscious, but which recovered. He refers to this as typical, because, if a stimulant were not wanted in it, a stimulant cannot be called for in examples less severe. The course followed was simply to lay the patient quite recumbent when signs of faintness supervened, and, so long as he could swallow, to feed him with warm milk and water freely. Such, in my opinion, is the proper treatment to be employed in every instance of syncope from loss of blood.—*Dietetic Gazette*, June, 1891.

BROMOFORM AS A TOPICAL APPLICATION.

Dr. Solomon Solis-Cohen, writes in the *News*: I have recently employed bromoform in a severe case of ozæna as a topical appli-

cation to the nasal mucous membrane after thorough cleansing with hydrogen dioxide. The absence of the severe local reaction anticipated, together with the extraordinary success of the measure, not only in destroying the odor but in controlling the morbid secretion, encouraged me, after preliminary trial upon my tongue and pharynx, to use the same agent as a topical application to tuberculous and other ulcers of the larynx, after cleansing with hydrogen dioxide. Here the agent seemed to exert analgesic as well as disinfectant properties, as pain was relieved and healing apparently promoted. The agent being extremely volatile, the immediate effect is transient, and I have, therefore, followed the application of bromoform with insufflation of iodoform in powder. While this somewhat obscures the therapy, yet the effect was better than when iodoform had been used without bromoform in the same cases. This preliminary note is published at this time to induce further trial and report by others.

THE GOOD RESULTS OF MASSAGE.

Dr. Agostini (*Archivio di Ortopedia*) presents the statistics of 417 cases observed during the last six years, both in private and hospital practice. He thinks that massage should only be employed by the physician, and cites a case where the brutal manipulation of an inexperienced masseur produced serious disorders. His material consisted of the following traumatic lesions: 41 cases of dislocations of the tibio-tarsal joint, 12 of the radio-carpal, 6 of the elbow, 3 of the knee, 15 cases of contusions, 12 cases of rupture and laceration of muscles, 9 of fractures and 5 of luxations. He has also treated 74 cases of severe inflammation of the joints and the resulting articular degenerations, with rapid and complete recovery. Articular and muscular rheumatism were also relieved.—*Revue d'Hygiène Thérapeutique*, January, 1891.

PHYSIOLOGICAL EFFECT OF BATHS IN TYPHOID FEVER.

"Dr. Kurkutoff, who has examined the physiological effects of the baths administered to typhoid fever patients in Professor Manassein's clinic in St. Petersburg, finds that such baths exert only a slight effect on the assimilation of the fatty constituents of foods, which, as in other fevers, is notably less than in healthy persons, and indeed varies directly with the gravity of the case; but there seems to be a good deal of differ-

ence as to the power of assimilation of fatty matter in different cases, probably depending on the functional disturbance in the bowel and on the amount of the individual peculiarities of the patient. In the graver cases the effect of the baths was to improve somewhat the assimilation of fat to the average extent of nearly four per cent. In slight cases, however, the effect was, apparently at least, to diminish the assimilation to the average extent of rather more than six per cent."—*Lancet*.

A PRACTICABLE AND PAINLESS METHOD OF USING IODINE HYPODERMICALLY.

In the *Medical News* of April 14, 1891, Dr. E. Fletcher Ingals, discussing the Shurly-Gibbes treatment of pulmonary tuberculosis, says: "It is usually best, excepting in advanced cases, to begin with iodine, though it is apt to cause considerable smarting," etc. In the *Therapeutic Gazette* for April, 1891, Drs. Shurly and Gibbes say: "The iodine solution gives considerable pain to some people, to others very little; but the gold solution gives little or none. We hope that a solution can be made with lanolin, or something of that sort, which will obviate this objection in the case of iodine."

Having found the use of the iodine solution exceedingly painful, in one case so severe as to lead to the conclusion that if its use was persisted in, local anæsthesia, by means of spray or other more or less inconvenient method, must be resorted to, I found that the injection could be rendered absolutely painless by incorporating with the mixture as used by Drs. Shurly and Gibbes, a small quantity of creasote, or better, guaiacol. Another objection to the solution as prepared by Drs. Shurly and Gibbes is the large quantity necessary to be injected when it is desired to administer the full dose of one-half grain of iodine. This requires that sixty minims be introduced beneath the skin, and since the hypodermatic syringe, as usually made, has a capacity of but thirty minims, either the barrel must be unscrewed and refilled, the needle meanwhile being left sticking in the skin, or if the needle is withdrawn a second puncture must be made, all requiring time and causing additional pain. This might be avoided by increasing the strength of the solution, which, I infer, has been found impracticable, because of increased pain or other reasons. The object can be attained by incorporating iodoform in the solution to be used, and thus combined, the anæsthetic effect of the guaiacol

is increased and prolonged. The formula that I have adopted after a number of trials as most eligible is as follows:

R Eucalyptol, pure.....M xxxij.
Guaiacol, pure.....M xvj.
Iodoformgr. viij.
Iodine.....gr. jv.
Ol. amygdal. dulc. (sterilized) q.s. ad. f3j.
Sig. For hypodermatic use · 10 to 30 minims daily or alternating with gold and sodium solution, as desired.

The anæsthetic properties of this solution are such that patients prefer its use to that of the gold solution, although the latter is nearly painless. Larger doses of the guaiacol and eucalyptol than are contained in the thirty minims of the above solution have, in my hands, caused excessive and exhausting sweating, with no proportionate benefit. The amount of iodine in this formula is the same as that contained in the Shurly-Gibbes solution, with, as will be seen, double that quantity of iodoform. Therefore the dose may be but one-third to one-half of that of the Shurly-Gibbes solution.—Dr. A. O. Squier, in *Med. News*.

THE TREATMENT OF VARIOUS TOXIC AMBLYOPIÆ.

1. *Alcoholic Amblyopia*:—Complete abstinence from alcoholic drinks. Aid nutrition by administration of tonics and healthy foods; calm cerebral excitement by a course of bromides. Locally, by instillation of eserine or of pilocarpine the existing mydriasis can be overcome. Recourse should be had to hypodermatic injections of strychnia, the galvanic battery, hydrotherapy and to ocular douches.

2. *Tobacco Amblyopia*:—Moderate use of tobacco. According to Sichel and Mackenzie, the smoking of fifteen to twenty grammes (about half an ounce) of tobacco per day is a toxic dose; never smoke but two-thirds of a cigar, as the last third is a reservoir for nicotine. The preceding is prophylaxis. If amblyopia exists, use of tobacco must be prohibited. Stimulate nutrition, give inhalations of nitrite of amyl, injections of strychnia, constant current of electricity and ocular douches.

3. *Saturnine Amblyopia*:—The treatment is that for saturnism: purgatives, sulphur baths, iodide of potassium in large doses, and tonic regime.

4. *Quinine Amblyopia*:—The elimination of the drug is facilitated by giving purgatives and diuretics; use also inhalations of nitrate of amyl, injections of strychnia and electricity.

5. *Amblyopia from Antipyrine*:—The author cites numerous cases of amblyopia

associated with ischæmia of the retina following the use of large doses (four to seven grammes) of antipyrine taken through a period of several weeks. Discontinuance of the use of the drug restored vision at the end of about ten days.

6. *Amblyopia from the Fumes of Carbon Disulphide*:—The patient will have to abandon his occupation as one of the first requisites to recovery. The use of tonics, iron and quinine, a substantial diet, subcutaneous injections of strychnia, inhalations of nitrate of amyl, and galvanic electricity will all aid toward effecting a cure. As a means of prevention, prohibit the manufacture in rooms; ventilate perfectly; hermetically seal containers; observe great cleanliness on the part of workmen; they should change their clothes on leaving the factory. —*L'Union Médicale du Canada.*

BORAX IN EPILEPSY.

Dr. Dijoud has tried this remedy in twenty-five cases, and he claims to have entirely cured one, and to have relieved all except six. The duration of the treatment varied from one to seven months, and he was able without inconvenience to carry the dose up to ninety grains a day. This was only possible if a beginning were made with small doses, which were gradually increased; and when the dose exceeded sixty grains daily he found it advisable to add some glycerine to the water and syrup in which the drug was usually administered. It should also be mentioned that the patients to whom Dr. Dijoud administered borax had been treated unsuccessfully with the bromides, and there seems now to be little doubt that in certain cases of epilepsy, borax is of very considerable use. It is desirable that particulars should be furnished of the time that elapsed between the cessation of the treatment by bromides and the inauguration of that by borax, as it is well known that epileptics who have been treated with bromides often improve much in their condition after the drug has been left off; and it is necessary to distinguish this improvement, which at least occasionally occurs, from that which may be due to the administration of a fresh remedy. —*Lancet.*

ANTIPYRIN AND ANTIFEBRIN IN POLYURIA.

In the *Médecinskoïe Obzorrenië*, No. 5, 1890, p. 487, Dr. I. I. Maslovsky, of Bûrnak, draws attention to antipyrin and anti-

febrin as remedies for diabetes insipidus, and adduces an interesting illustrative case referring to a sickly and highly nervous peasant-lad, sixteen years old, with polyuria of a nervous origin and of six years' standing, in which the use of these drugs was followed by a striking and apparently permanent decrease of both thirst and amount of urine. Antipyrin was administered at first in eight-grain doses four times daily; later twelve grains five times a day; then finally twenty-four and twenty-six grains four times daily, the whole course lasting thirteen days. The daily quantity of urine fell from 11.700 cubic centimeters to 6.100; that of water ingested from 10.600 to c. c. to 6.200. After an interval of three days, antifebrin was resorted to in from six to eight-grain doses four times daily, for eight days. The daily quantity of urine decreased from 6.300 c. c. to 4.100; that of water ingested from 7.450 to 4.590. No unpleasant effects were ever noticed from either of the remedies.

MEDICINE.

ELIMINATION AND ITS USES IN PREVENTING AND CURING DISEASE.

The above was the title of the Cavendish Lecture, delivered June 12th, by Dr. T. Lauder Brunton. Particular emphasis was placed on the importance of free elimination by the bowels. Not only the brain, but the heart, lungs, liver, stomach and kidneys have their functions impaired when the bowels cease to do their duty. Napoleon's disaster at the battle of Leipzig is popularly set down to his having eaten a bun in a hurry, and so brought on dyspepsia; but it would be a very curious page of history if we could learn how many wars, how much bloodshed, and how much cruelty have had their origin in imperfect action of the bowels. Washington Irving, in his "Lives of the Caliphs," tells of a certain emir named Al Hejagi, who suffered for many years from dyspepsia and abdominal pains, and this wretched man distinguished himself, perhaps above all other rulers who ever lived, in the enormous number of people whom he sentenced to imprisonment and death. He is said to have caused the death of no less than 120,000 persons, besides those who fell in battle, and to have left 50,000 in prison when he died himself. How much of all this misery might have been averted by the judicious use of mild aperients, it is as impossible for any one now

to tell, as it is to estimate the debt of gratitude which Europe owes to the physician of Louis XIV for the care he took of the bowels of that august monarch.

In mitral disease and in dropsy, either cardiac or renal, the benefit derived from the free use of the compound jalap powder is very great; and in his work on "Purgative Medicines," Dr. Hamilton describes most forcibly the advantages he obtained from purgatives employed in such a way as merely to clear the bowels, not to produce violent purging, in typhus fever, malaria, scarlet fever, hysteria, chorea and tetanus.

Most persons can regulate their bowels by exercise and diet, but these sometimes fail, and we must have recourse to so-called aperients. The dinner-pill supplies a very useful stimulus, and Dr. Brunton knows a man who has taken one every day of his life for forty years, apparently with great benefit to himself. But there are some people who do not seem to thrive on dinner-pills, and they either do not get any action at all, or they get too much. In such cases, instead of giving the intestines one great push once a day by the dinner-pill, one may give them a series of gentle jogs by adding to each meal a minute quantity of a purgative; and Dr. Brunton has found that one-tenth of a grain of aloin given with each meal sometimes succeeds when other means fail, and even these minute doses sometimes seem to be too much.

But many persons, besides the dinner-pill, require a weekly clear-out; and if this be not given to them by means of a cholagogue purgative, they have a regular sweep-out once a month by getting a violent migraine with bilious vomiting; and generally they are obliged to fast for at least one day during the continuance of the headache. The effect of a cholagogue purgative such as a mild mercurial, followed by some saline, is sometimes very remarkable. Dr. Brunton has seen a quarter of a grain of calomel, with a Seidlitz powder next morning, surprisingly change the temper of a sulky boy or girl; and he has more than once taken the "naughtiness" out of a peevish child by a dose of Gregory powder, which, being nasty to the taste, has both a moral effect and a physical action.

Not infrequently adults suffer from nervous irritability, depression, weakness, and inability to do anything; and this is often put down to neurasthenia and hypochondriasis. They are treated with nerve tonics and sedatives, change of scene, baths, etc., to little purpose; nervous and depressed they still remain. In some of these cases, we may

notice a large amount of mucus in the motions, and sometimes there appear to be actual casts of the intestines, long, membranous-looking shreds, apparently tubular in their character. This condition has been described by Dr. James Simpson, under the name of "membranous enteritis"; and it is not usually said to be associated with hypochondriasis, but often it is looked upon as a consequence rather than the cause of the nervous condition which is its usual concomitant. But it is no use here to treat the nerves. If you wish for any good result, you must treat the bowels. In some, probably many cases, conditions depend upon partial constriction of the intestine near the junction of the sigmoid flexure with the rectum. The motions, lodging here, cause an inflammatory condition of the mucous membrane and profuse secretion of mucus, which either simply coats the fecal matter, or forms a kind of false membrane. In adults, prolapse of the sigmoid flexure into the rectum may give rise to great nervous disturbance lasting for years, unless its existence be suspected and the proper treatment adopted. One useful remedy is the injection of two to four ounces of cold water immediately after a motion. This is to be retained, and has the tonic effect of a cold bath on the intestine, increasing the contractile power and lessening the tendency to prolapse. In all cases of this kind the regular use of suitable laxatives should be enjoined.

Dr. Brunton, in the same lecture, urges the importance of maintaining a healthy state of the renal function, and speaks of the benefit in gouty and rheumatic cases, and in bilious colic, of making patients drink a big tumbler of water, and especially hot water, every morning, with or without some Carlsbad salts added to it, and, if necessary, repeating the hot water once or twice in the day.—*Boston Med. Surg. Jour.*

THE NERVE OF THE CORNEA.

Dr. A. C. Dogel, has examined eyes which had been taken from the body from five to seventeen hours after death. The result of these examinations, as published in a Russian ophthalmic review, was that he found the cornea provided with from sixty to eighty small nerve branches, some with and some without medulla, of which from twenty to thirty go to the posterior corneal surface, and from forty to fifty to the anterior. In these nerves a central filament and a peripheral axis cylinder substance may be distinguished.

The central filament resolves itself into single nerve fibrillae. Within the corneal parenchyma the nerves and their branches form a primary plexus. This primary plexus gives out secondary branches, called "rami perforantes," which form the sub-epithelial plexus, and this again gives rise to still finer ramifications forming an intra-epithelial plexus. The same nerve branch generally shares with its branches of the second order in the formation of all these plexuses. The nerve terminations in the epithelium are bulb-shaped, and form ganglions. An especial thickness and zigzag course distinguish those filament which go to the stroma of the cornea. These also form a plexus. Each layer of the cornea has a separate plexus except the membrane of Descemet and the next layer, which have no nerve plexus. The author believes, in opposition to Kuehne and Waldeyer, that the nerves of the cornea have no sort of connection with its cells and corpuscles, but are merely situated between them.—*Lancet*.

A NEW POINT—NOTE ON THE VIRILE REFLEX.

Dr. C. H. Hughes says in the *Alienist and Neurologist*: If you take a perfectly healthy individual, whose spinal cord is entirely normal, especially in its genito-spinal center, and place him on a couch without head-rest, supine and nude about the loins, and make the sheath of the penis tense by claspings the foreskin with the left index finger and thumb at about the place of the frænum, and pulling it firmly towards the umbilicus, placing the middle, ring and little finger low down upon the dorsum of the virile organ, for perceptive purposes, and then sharply percuss the dorsum or sides of the penis, near the perineal extremity, a quick and very sensible reflex motor response or retraction of the bulbo-cavernous portion will be felt to result from this sudden percussional impression, like that which follows, though less pronounced, in the testicles, after sensory irritation of the inner aspect of the thighs, and known as the cremasteric reflex. The reflex jerk is away from the irritating impulse, though it is down towards the perinæum in the penis reflex, while it is upwards in both the cremasteric and patellar tendon phenomena. I have not seen this phenomenon described before.

This reflex symptom is of important clinical and physiological significance. Its full value for diagnostic and prognostic purposes has yet to be determined by further investi-

gation than I have given it. But I have learned enough to confidently commend it to neurological clinicians.

I have called it the virile reflex, because it seems to be actively present in all healthy adult males with normal spinal cords, whom I have examined, and absent in infants, and feeble or absent in male children who have not attained the age of puberty. A number of years ago I ventured the assertion that the absence of the cremasterick reflex would be found of significance in the determination of impaired virility from sexual excess and masturbation. This subsequent experience has only been confirmed. Now this new sign—the penis percussion reflex—present, impaired or absent, gives us another valuable evidence of the vigor, impairment, loss or abeyance of the sexual powers in man.

After prolonged excessive venery it becomes impaired or disappears, to return again with sexual recuperation.

After excessive masturbation, long continued, with accompanying neurasthenia, I have found it impaired, but seldom entirely absent in young subjects. It is not impaired in masturbation when the habit has not destroyed the sexual power. It disappears in some cases of chronic meconism, and becomes abeyant in long and beastly intoxication, though often excitable in acute alcoholism. This subject needs further investigation.

It is lowered and abeyant in the later stages of typhoid fever, and I have found it also in the moribund state. I have found it absent in old men who have acknowledged and sought treatment for entire virile incapacity.

It is often, but by no means uniformly, found in sympathy with the other reflexes in spinal cord disease of the lumbo-dorsal spine as the quadriceps extensor femoris tendon reflex, the anal, vesical and cremasteric reflex, the Achilles reflex and ankle clonus.

A kind of erector penis clonus, characterized by a succession of jerks, continuing after the percussion or while the foreskin is kept stretched, much like the characteristic ankle clonus, having been elicited in one case of transverse dorsal spinal myelitis with double ankle clonus only to fade away as the ankle clonus disappeared. I found it absent in another case.

This phenomenon may also be elicited by suddenly jerking the foreskin after it has been made tense, or by pinching the theca of the penis when it is in this stretched condition. This reflex may be reinforced like the knee phenomenon. Electrical excitation will also

evoke it. A clonus may sometimes be elicited in this way.

Some skill in palpation—a sort of *tactus eruditus* is necessary in examining for this sign, the characteristic jerking back of the bulbous urethra within the sheath of the penis being felt only when carefully sought for. It is not ordinarily to be seen.

This sign does not always sympathize with the other reflexes in spinal column or cord disease. I have lately found the sign absent in the case of a married man, aged 45, sent me by Dr. Charles Barck, the accomplished ophthalmologist of the Marion-Sims Medical College, who diagnosed white atrophy of the retina. This man has also unequal pupils, exaggerated patellar reflexes, and other evidences of *scleros in plaques*. He gave a history of syphilis, and confessed to feeble virile powers. In him the virile reflex was scarcely perceptible. I found it absent on the same day in another, but older patient, with optic atrophy, unequal pupils and cerebral sclerosis, which I regard as one of multiple cerebro-spinal disease. The optic atrophy was diagnosed by Dr. Post and Dr. Wolfner. This man's age, however, is fifty-six, but the sign is not normally absent at that age in healthy men. I have found this sign absent in the status epilepticus, but not necessarily modified in hemiplegia. It was exaggerated in a case of paraplegia of cerebral origin.

It should receive further consideration at the hands of neurological clinicians, for it appears worthy a place in clinical neurology with Westphal's papadoxical contraction, Erb's reaction of degeneration, or any of the hitherto recognized diagnostic reflexes.

SOME PRACTICAL POINTS IN THE DIFFERENTIAL DIAGNOSIS OF IRITIS AND CONJUNCTIVITIS.

Dr. Frederick E. Cheney, writes in the *Boston Med. Surg. Jour.* that the importance of making a correct and early diagnosis, in cases of iritis, and of using atropine, or some other mydriatic, until the inflammation has subsided, is evident, when it is considered that many patients are afflicted with permanent poor vision and not a few with blindness, as a result of improper treatment in this disease. In most of these cases the trouble has probably been mistaken for conjunctivitis, the eye has been treated with "borax and camphor," or some other mild astringent collyrium, and a disease which usually terminates favorably when treated

from the beginning with atropine terminates most unfavorably.

The presence or absence of pain, and its character and situation, if present, is a symptom of great value, and cannot be too carefully investigated. In conjunctivitis, there is often no pain, other than a feeling of "sticks and sand" in the eyes, while at other times pain of moderate severity is complained of and is referred by the patient to the eyeball. In iritis, on the other hand, pain is usually a prominent symptom, it is paroxysmal in character, coming on most frequently in the early hours of the morning, and is not situated to any degree in the eyeball itself, but in the brow and temple, sometimes extending over the entire side of the head. If this neuralgic pain is of great severity, especially if accompanied by a marked rise of temperature and a loss of appetite and flesh, the redness of the eye may be overlooked both by the patient and physician, or regarded simply as a congestion secondary to the neuralgia. Neuralgia of the temple and brow, in connection with redness of the eye, should always make one suspect iritis as the cause, and should lead to a careful examination of the pupil, as to its size and reaction to light. Having placed the patient facing a bright light, the well eye is to be covered, while the inflamed eye is to be shaded from the light with the examiner's hand. If the case is one of conjunctivitis, the pupil will quickly dilate when the eye is shaded and again contract when exposed to light. If iritis, however, it will be noticed that the pupil is smaller than normal, and that it reacts little or not at all when the eye is alternately shaded and exposed. These three symptoms, redness of the eye, neuralgic pains in the temple and brow, and a pupil which reacts sluggishly or not at all to light, are most valuable diagnostic symptoms in iritis, and when present, should leave doubt as to the nature of the disease. Intolerance of light is usually present in iritis, but may also be present in conjunctivitis. The iritis tissue is usually discolored in iritis, the change at times being very noticeable, while at other times it is slight and can be easily overlooked. The character of the vascular injection should of course be noticed, the circumcorneal vessels being injected in iritis, and the conjunctival vessels in conjunctivitis. It is not uncommon, however, to see a moderate injection of the circumcorneal vessels in conjunctivitis, or to see a considerable injection of the conjunctival vessel, and even oedema of the tissue, in iritis.

To emphasize what has already been said, the symptoms most to be depended upon in making a diagnosis of iritis, are, redness of the eye in connection with neuralgic pains of the temple and brow, and a contracted pupil that reacts sluggishly or not at all to light. Sub-acute and chronic cases are at times met with in which the pain is slight or absent, and the circumcorneal injection but poorly marked. The pupil will, however, be contracted and sluggish, and as the trouble often exists for some time before medical advice is sought, firm adhesions between the pupillary border and lens will probably be found after atropine has been used. Also, in acute iritis, pain may not be complained of the first few days, and in exceptional cases may be absent during the entire course of the disease. The absence of supra-orbital and temporal pain, therefore, although a most frequent and valuable diagnostic symptom, does not exclude iritis, and the presence of other symptoms must always be looked for. If, after careful examination, a doubt as to the nature of the disease still exists, a safe rule to follow is; when in doubt, use atropine. If the disease proves to be conjunctivitis, the use of atropine for the first day or two will have caused no permanent harm, the mydryasis and paralysis of accommodation passing off within ten days or a fortnight. If, on the other hand, it is iritis, we shall have the pupil well dilated, and if kept so by the use of atropine until the inflammation has subsided, it will be almost impossible for adhesions to form between the iris and the lens.

The value of the early and constant use of atropine in iritis cannot be too strongly insisted upon. A wide dilation of the pupil is of course the end in view; and while, as a rule, a one-per-cent. solution of atropine sulphate used three or four times a day will accomplish this, a more frequent instillation or stronger solution is sometimes required.

SURGERY.

METASTATIC CARCINOMA OF THE FOREARM.

The law, that while sarcomata often spread by the blood, carcinomata follow the lymph-channels, has its exceptions. Hefrich (Abat. in *Centralblatt f. Chirurgie*, 1891, 14,) gives a unique case of a man 78 years old, with a large spindle-shaped growth which had developed, entirely independently of the skin, deep in the muscles of the fore-

arm. The diagnosis wavered between enchondroma and myositis ossificans. The microscopical examination, however, showed it to be a carcinoma. A second, more careful, examination of the patient then revealed a small tumor the size of a pea, covered with a crust, in the lower lip. This was extirpated and proved to have the same microscopical structure as the tumor in the arm. Inasmuch as this lip-growth had existed for four years, while that in the arm had developed within a year, it seems reasonable to suppose that the latter was a metastasis from the former. The patient made a good recovery after an exarticulation at the shoulder. —*Exchange.*

THE CLOSING OF TREPHINE OPENINGS BY CELLULOID PLATES.

A case was presented to the Vienna Medical Society by Hinterstoisser (*Wiener Med. Presse*, No. 42, Bd. xxxi) showing the successful result of an effort to close a trephine opening by a celluloid plate. The patient, some months after recovering from a comminuted fracture of the left parietal bone, suffered from giddiness, weakness, loss of power in the right side, and chronic twitchings of the right facial region and the corresponding upper extremity. Three years later epilepsy developed. Examination showed a hyperæsthetic depressed cicatrix corresponding to the position of the upper portion of the ascending parietal convolution. There was also bilateral concentric narrowing of the field of vision, diplopia on looking to the left, and sensory and motor paresis of the left side. The cicatrix was excised, a periosteal flap raised, the depressed bone removed, and the healthy non-adherent dura incised, showing normal brain cortex. The dura was sutured; on the fourth day it was found united. A polished celluloid plate was now fitted over the trephine opening, the periosteum was stitched over this, and finally the skin wound was sutured. Healing was prompt and all brain symptoms ceased. Two other successful cases were also reported where celluloid plates were used in a similar manner.—Quoted in *Amer. Jour. Med Sc.*, June, 1891.

THE EXTRACTION OF BROKEN NEEDLES.

Dr. Charles Steele, thus writes in the *Lancet*: All who have had much to do with this minor operation know how frequently a satisfactory result fails to be obtained unless the indications for a safe operative procedure

are strictly observed. It is most unpleasant, after cutting and probing with the finger and forceps, to be obliged to tell a patient who has endured some pain and much discomfort that further attempts are useless, and that the fragment is still there; and perhaps suggest as the best consolation that the needle has a more free opening by which to work its way out. I have for many years declined to cut unless I could make out the situation of a point, and that the other end had a firm bearing to rest upon; giving the assurance that patience and watching are the proper treatment for the time being.

Lately I have adopted a very simple, painless, and reliable plan, and have regretted that I had not thought of it in many previous instances. Last autumn, when I was visiting a child, a young lady, his sister, came into the room using her right foot naturally, but resting only on the toes of her left foot, and explained that she had gone about in this way for fully three weeks, as she had broken a needle into her left heel, and the slightest touch gave her great pain. The point of entrance was visible in the middle line in front of the tuberosities of the os calcis; the end of the fragment could be recognized through the skin, but the slightest pressure made it recede. I declined to operate, but directed that two thick felt corn plasters, one on the other, should be applied, with the puncture occupying the central hole, and that she should walk freely and bear well upon the heel. This she did with perfect ease, and after ten days the needle presented, and was withdrawn readily. It was the eyed end, and almost an inch long. Soon after I saw a little girl, aged three years, who when away from home in the summer had also trodden upon a needle, which broke and entered between the ends of the metatarsal and tarsal bones. A surgeon saw her promptly, cut down, and tried for some time to extract, but failed. She often felt no inconvenience, but at intervals limped suddenly, and complained of pain. She was persuaded to wear a corn plaster, and after three weeks the portion of needle, which had been in more than three months after producing a little superficial irritation, showed itself, and her nurse drew it out. The wrist and the ball of the thumb are not unfrequently punctured, and if the fragment enters obliquely, or lies close to arteries or nerves, and cannot be forced into prominence, attempts at extraction are, to say the least, undesirable; whereas, by adopting this simple method, after the manner of removing a thorn with the pipe of a key, and producing pressure with an elastic

wristlet or slight steel spring like a small truss, the fragment will work out, and not give pain from knocks while under the skin. In that awkward position, the soft parts by the sides of the ligamentum patellæ, this plan can be used. It recommends itself to everyone's common sense, and has the great advantage of not leaving any cicatrix.

A FEW SURGICAL EXPERIENCES AND WARNINGS.

Mr. W. F. Favell read a paper before the Sheffield Medico-Chirurgical Society in which he said that while freely acknowledging the great results which had followed upon the improved surgical procedure of the last 20 or 30 years, he defended the principle of conservation in surgery, and laid down as a general proposition that in the case of malignant growths, for example, unless they could be removed wholly, they were better left alone altogether. He instanced some cases in point from his own experience. He had a great dislike to incompetent operations. He deprecated exploratory incisions in the case of tumors, unless the surgeon was prepared at the time to remove the tumor bodily, if necessary, all such measures tending to stimulate the growth into increased activity. Mr. Favell then referred to the danger in certain cases of going to the other extreme, and of the severity and magnitude of the operation, risking life without the fair prospect of good ultimate results in so-called "successful" cases. He instanced the recommendation of Mr. Mitchell Banks, that in all cases of removal of malignant tumor from the breast, all the auxilliary glands should be extirpated at the time, whether diseased or not. This, which was a large operation, was not without immediate danger to the life of the patient, and Mr. Favell doubted the alleged greatly diminished probability of return after its performance. He had grave doubts as to the wisdom of meddling with an axilla in which there was no evidence of cancerous implication. Axillary glands were very difficult to clear away from their deep situation and attachments, and he believed the tearing of the cellular tissue, where the use of the knife was contra-indicated, might be productive of irritation calculated to increase the liability to a return of malignant growth. Thus he instanced a very striking case bearing on his remarks, which had occurred in his own practice. Mr. Favell then proceeded to speak of the danger of catheterization in certain cases of retention from chronic

prostatic enlargement, when the bladder contained a considerable amount of residual urine and the kidneys were diseased; quoting from Sir Benjamin Brodie, who suggested the advisability of only at first partially emptying the bladder from time to time, Mr. Favell mentioned a case in which he had seen adynamic symptoms, followed by a fatal result in three or four weeks, after the first introduction of the catheter, and on the other hand he had known other people live with a condition of incontinence from overflow, in comparative comfort for months and years, where catheterization had not been resorted to.

TRANSPLANTATION OF TEETH.

In a monograph on this subject, Dr. Julius Scheff details a large number of experiments made on animals, together with histological examinations, which tend to show that, in the majority of instances, the union is periosteal. It may take place by first intention, the alveolar periosteum uniting directly with the cement of the tooth without absorption of the latter; or the periosteal proliferation may produce a more or less extensive absorption of the cement, which if carried too far, may result in extrusion of the tooth. The experiments also demonstrated that the pulp of every implanted tooth becomes necrotic, and this condition may exist, notwithstanding the occurrence of firm periosteal adhesions; or a new tissue may take the place of the necrotic structures. In the dog, this new tissue originates in the pulp canals, and consists of a delicate vascular connective tissue, which differs from the normal pulp by the absence of odontoblasts, or it may result from a proliferation of the periosteum into the pulp canals through openings caused by absorption of their walls. If the latter occurs, the periosteum may undergo caseous transformation, after absorption has ceased.

Of great interest in this connection are the investigations recently made by a Russian physician, Dr. Znamensky regarding the implantation of artificial teeth both in animals and human beings. He experimented with teeth constructed of porcelain, hard rubber, and metal, at the roots of which he made a large number of fine incisions. The process consisted in a proliferation of granulation tissue from the alveolar walls into the fine openings at the root of the tooth, thus holding it firmly in position. It is questionable whether artificial teeth can be embedded with sufficient firmness to with-

stand, for any length of time, the violence to which they are subjected during mastication.—*International Journal of Surgery.*

THE QUESTION OF SURGICAL INTERFERENCE IN PERFORATING WOUNDS OF THE STOMACH AND INTESTINES.

Reclus (*Oblt. of Chirurg.*) gives three new cases, from the French literature, where the opium treatment without laparotomy gave favorable results. Altogether Reclus has gathered ninety-one cases in which systematic expectant treatment was carried out with 75 per cent. of recoveries. On this basis he believes that laparotomy should be employed only for one or more of the following indications: (1) Cases where the intestines protrude through the external wound; (2) where signs of internal or external hemorrhage are present; (3) where percussion in the region of the liver, or the introduction of a catheter through the external wound shows the escape of gas or intestinal contents into the peritoneal cavity; (4) when the nature of the trauma (e. g. the full force of a horse-kick) renders probable an extensive laceration of some viscus; (5) when in spite of energetic internal medication the signs of a peritonitis occur. The last indication Reclus admits to be very questionable.—*Ez.*

GYNÆCOLOGY.

SALPINGITIS AND CASTRATION; ARTIFICIAL EVACUATION OF COLLECTIONS OF FLUID IN THE TUBES THROUGH DILATATION AND DRAINAGE OF THE UTERUS.

Dolérís (*Nouv. Arch. d'Obstet. et de Gyn.*) speaks against the abuse of castration in salpingitis, which can be found even to-day. Very often the operation is performed without the presence of sufficient indication; frequently in cases which are still amenable to conservative treatment. After a description of the different kinds of collections of fluid, he emphasizes once more in the conclusions that every salpingitis should be watched for months, and castration should be regarded as a *dernière ressource*. A large number of cases could be cured by artificial evacuation through the uterus.

His procedure consists in:

1. Dilatation of the uterus. First, laminaria tents are used, then sponge, which is rendered aseptic and pushed up to the fun-

du uteri. Through the swelling of the sponge the uterine openings of the tubes are dilated.

2. Careful curetting of the uterine recesses, in order to remove hindrances which might interfere with the discharge, and which are often caused through a proliferation of the mucous membrane near the orifices of the tubes.

3. Drainage of the uterine cavity by packing it with iodoform gauze soaked in glycerine. The gauze must be changed every day; at most, every second day. According to the diminution of the tumor, the amount of gauze is gradually diminished.

After the operation the patient receives daily antiseptic irrigations of the vagina; afterward, an iodoform-glycerin tampon is introduced.

Dolérís emphasizes especially the fact that the patient should rest for a long time after treatment, and especially should remain in bed at the time of the first menstruation.

Not in all cases has Dolérís had the desired result.—*Ann. Gyn. Pæd.*

THE TREATMENT OF UTERINE FIBROIDS WITH APOSTOLI'S METHOD.

N. Kjaerguard, Copenhagen (*ibid.*), has treated twenty cases and gives the history and results of treatment in detail. Two deaths occurred—one in a very weak patient, with a cardiac lesion and with a growth in the uterus the size of a child's head. There were very severe hæmorrhages which resisted all forms of treatment. She had had eight applications of positive intra-uterine galvanism, ranging in intensity from 40 to 140 milliampères, and had borne them well; she was then given negative intra-uterine applications, and after the third séance (185 milliampères) fever set in and on the eighth day she died from heart weakness (?). No autopsy.

In the second fatal case the patient suffered with chronic bronchitis, with dilated bronchi, and had a growth of about the size of a child's head. In this case the hæmorrhage was only temporarily arrested by positive intra-uterine applications. In the last séance the hæmorrhage following was so great as to necessitate an intra-uterine tampon. A hysterectomy was then done, but the patient died within twenty-four hours. In the uterine cavity was found a large venous opening of about the size of the radial artery. Presumably the copious

hæmorrhage occurred from this opening.

In the remaining cases the results obtained were very good; the hæmorrhages were arrested or, at least, much diminished; the pains vanished, and the symptoms due to pressure decreased in a marked degree.

TORSION OF THE PEDICLE IN OVARIAN CYSTS.

Küstner (*Centralblatt für Gynäkologie*, 1891) has made a number of observations bearing on this interesting subject, and differs from other authors in his explanation of the etiology. In his last thirty-six ovariectomies he found in fourteen cases (38.8 per cent.) torsion of the pedicle up to at least 180°. Rokitsansky records 13 per cent., Thornton 9.5 per cent., Olshausen 6.3 per cent., and Horwitz 23.2 per cent. He explains the greater frequency of this complication in the Dorpat clinic by the fact that in most of the cases inflammatory adhesions existed. In the majority of the cysts of the right ovary the torsion was toward the left, in those of the left ovary toward the right. His explanation is as follows: As soon as the tumor rises out of the pelvis and comes in contact with the abdominal wall it tends to fall forward, displacing the uterus backward. The ovarian ligament is now put on the stretch and crosses the tube, so that when the tumor lies in contact with the abdominal wall there is really a torsion of its pedicle to the extent of 90°, which is usually overlooked at the time of operation. If the pedicle is small, and the abdominal wall relaxed, changes in the centre of gravity of the tumor are readily produced by changes in the position of the patient; when she lies upon her left side it tends to rotate from right to left, since the infundibulo-pelvic ligament (which is its principal attachment) extends from the posterior wall of the pelvis anteriorly from right to left. The reverse is the case when she lies on her right side. This torsion is probably only temporary. After the neoplasm occupies the abdominal cavity the pressure of the intestines upon its posterior surface during peristalsis tends to increase the existing torsion; this pressure on the right side is exerted most upon the left side of the tumor and *vice versa*. This theory was supported by a case of double ovariectomy of the writer's, in which the pedicle of the left tumor was twisted 180° to the right, and that of the right to the left.—*Amer. Jour. Med. Sci.*

OBSTETRICS.

FIVE HUNDRED LABORS WITHOUT INTERNAL DISINFECTION.

Mermann completes his account of a series of 500 labors without an internal disinfection, in the *Centralblatt für Gynäkologie*, No. 20, 1891. In the 500 cases there occurred no death from sepsis or its complications. In the last 200 cases a vaginal douche was given once, in a case of placenta prævia which had been tamponed before admission to the hospital. The complications of pregnancy and labor are all fairly represented in the series, and with surprisingly good results. The only precaution taken against ophthalmia was irrigating the eyes with distilled water; but one case, and that a mild one, occurred.

Mermann employs scrupulous cleanliness and antiseptics externally but none internally, and limits vaginal examinations to the least possible number.—*Amer. Jour. Med. Sc.*

AN EPIDEMIC OF PUERPERAL FEVER.

This unusual occurrence in a well-conducted clinic forms the subject of an interesting narration by Döderlein, of Leipzig (*Archiv. für Gynäkologie*, Band xl. Heft 1), whose contributions on the bacteriology of sepsis are familiar. Three cases of lymphatic infection by the staphylococcus pyogenes aureus and streptococcus pyogenes occurred, the focus of infection being suppuration beneath an ill-fitting glass eye in a patient's orbit. In some manner the midwife who examined her infected her genital tract and that of two others, one of whom died. By control experiments upon animals it was observed that the union of the two micro-organisms produced an especially virulent infection. From the standpoint of treatment the intra-uterine douche is of value as soon as high fever announces the infection; if delayed, the micro-organisms are beyond the reach of the antiseptic and the douche is harmful. It is given by Döderlein by inserting a Cusco's speculum, washing out the vagina with sterile water and inserting a glass douche-tube into the uterus through which sterile water is allowed to run until it is seen that the flow is uninterrupted. A 2 per cent. creolin solution is then used to thoroughly douche the uterus. For the treatment of puerperal peritonitis, he advises absolute rest, ice to the abdomen, antipyretics, and opium. He believes that in-

ternal examination for diagnosis should be as infrequent as possible.

EXAMINATIONS IN REFERENCE TO THE CONSISTENCE OF THE BLOOD DURING PREGNANCY AND IN THE PUERPERIUM, AND THE COMPOSITION OF THE AMNIOTIC FLUID.

Nasse, in 1836 made examination of the blood of twenty-seven pregnancy cases, and at the end of twenty years had examined thirty-seven more. His results showed that the specific gravity is diminished, especially up to the eighth month, the fibrin is increased, there is a diminution of hemoglobin and a diminished number of red blood corpuscles, so that the condition during pregnancy is really one of chlorosis, and that this condition will explain many of the symptoms. Spiegelberg and Gscheidlein, on the other hand, found (experimenting on pregnant dogs) that the amount of blood was increased during the last half of pregnancy; that the amount of hemoglobin is rather increased than diminished, and that the amount of water contained is only slightly increased, if at all. Cohnstein observed that the amount of hemoglobin is increased, but that there is a diminution in the number of red blood corpuscles (experimenting upon pregnant sheep.) Fehling experimented upon pregnant women, and found that the hemoglobin was increased, as were the number of red blood corpuscles. He also examined the blood post partum, and found that in the majority of the cases (forty-seven out of eighty-three) the amount of hemoglobin was diminished, in ten it remained unchanged, and in twenty-six there was slight increase. The greatest diminution (forty-one per cent) occurred in cases of placenta previa, due, of course, to the great loss of blood. Counting the red blood corpuscles showed three to four million to one cubic millimetre (minimum 2,330,000, maximum 4,750,000.) After delivery a diminution of their number occurred. This would go to prove that a chloro-anemic condition is not a normal condition in pregnant women. For these experiments Fleischl's apparatus was employed.

Meyer made experiments in Berne, and they gave entirely different results from Fehling's. He showed, first, that in pregnant women during the latter months the number of red blood corpuscles and the hemoglobin are diminished; second, a short time after delivery the number of red blood corpuscles and the amount of hemoglobin are markedly

diminished—this must be attributed to the loss of blood during labor; third, in the puerperal state an increase of red blood corpuscles and hemoglobin occurs, and this is sometimes greater at the end of the second week than it was during pregnancy.

Reinl, seeing that the two previous experimenters differed so materially, took up the subject, and his results corresponded quite closely with those of Fehling, namely, that there is no chloro-anemic condition normally existing during pregnancy.

In making his experiments, Shroeder (*Archiv. f. Gynäkologie*) employed two instruments—Fleischl's hemometer and Gowen's hemoglobinometer. The blood was obtained by pricking the finger of the patient with a needle and mixing it with distilled water. To count the number of red blood corpuscles, the melangeur of Thoma-Zeiss was employed. The blood was mixed with ordinary salt solution. Two drops were always counted. Experiments were made upon forty-two cases, eight of these living in the hospital during pregnancy; the remainder did not enter until just before their delivery. Of these eight, three showed a small amount of increase of the hemoglobin, three a marked diminution in the same, and two were chlorotic patients. In all but one case a diminution in the number of red blood corpuscles was observed. Of the thirty-four who lived out of the hospital, twenty-five showed an increase in the amount of hemoglobin, and only nine showed a diminution. From these results we must acknowledge that an increase in the amount of hemoglobin occurs three times as often as does a diminution, as shown by my experiments as well as those of Fehling and Reinl. As to the number of red blood corpuscles in these cases, in the nine there was diminution corresponding to the diminution in the amount of hemoglobin. Of the twenty-five cases, in all but four there was an increase in the number of red blood corpuscles. These experiments were all made before delivery.

The blood was next examined two days after delivery, and in nearly all of the cases there was a diminution both in the amount of hemoglobin and the number of red blood corpuscles. This fact can probably be attributed to the blood loss during labor.

The third series of experiments were made upon the women from ten to twelve days after delivery. In twenty-five of the cases the amount of hemoglobin was increased, in eight it was diminished, and in four it remained unchanged. In twenty-two cases the

number of red blood corpuscles was increased; in fifteen cases it was diminished.

Experiments were also made with reference to the relationship between the conditions of the amniotic fluid and the hemoglobin, with the following results: We must consider the amniotic fluid as a serous transudation from the maternal vessels, and this undergoes the same changes as does the blood during pregnancy. If the amount of hemoglobin is increased, then the amount of albumen in the amniotic fluid is also increased.

PEDIATRICS.

THE ETIOLOGY OF CROUPOUS PNEUMONIA.

Modern medical research has devoted considerable attention to the study of the etiology of disease. In the department of bacteriology discovery upon discovery, indicative of the causal relation between microorganisms and disease, has been made and verified. In the enthusiasm and excessive zeal which attended the promulgation of a new and promising doctrine, the indifferent student is apt to ignore important accessory conditions in a desire to reach a preconceived ideal.

At this day no unprejudiced mind will attempt to controvert the validity of the germ-theory of disease; but we have not done in accepting the principle which the theory implies. Something more than a germ is requisite for the production of disease—not that the germ is a mere concomitant, but that, while perhaps the most important, it is but one of a number of elements, the association of which is the essential factor in the determination of a definite result; the soil must be fertile and the conditions propitious for growth and development. How else explain the immunity of some and the infection of others exposed to like influences under conditions apparently similar? Though we may never be able to explain the mode of action, it is well to recognize this association of etiological elements; while not detracting from the importance of the part played by microorganisms in the production of disease, we must not ignore or underrate the significance of other factors.

In a study of one hundred cases of uncomplicated croupous pneumonia, Brunner (*Deutsch. Archiv für klin. Medicin*, Hefte 1 and 2, 1891) was able to determine that the

disease is more common in males than in females; that most cases occur in the third and fourth decades of life; that those who lead active lives in the open air are predisposed; that the right lung is more commonly involved than the left; that the onset usually takes place in the morning with a chill; and that the disease is most prevalent in winter and in spring. Careful comparative observations upon the mean temperature, the mean humidity of the atmosphere, relative and absolute, the mean barometric pressure, as well as upon other meteorological conditions, in conjunction with the number of cases of pneumonia observed at different periods, revealed the fact that most cases occurred when the temperature was low, the absolute humidity slight, the relative humidity great, and the barometric pressure very high or very low. It appeared that those meteorological conditions that increased the physiological activity of the lungs favored the development of pneumonia.

The brief period of incubation which characterizes pneumonia may be explained by the almost constant presence of pneumonia-cocci in the air-passages, suitable extrinsic and intrinsic conditions conferring virulent properties upon a hitherto innocuous agent.

From many considerations it therefore appears that merely waging warfare against bacteria will not eradicate disease. The physical difficulties to be overcome alone render such a mode of treatment impracticable. A rational prophylaxis will have for its object the avoidance, as far as possible, of exposure to infection to deleterious influences of all kinds.—*Med. News.*

EUCALYPTUS OIL IN THE TREATMENT OF SCARLET FEVER.

As being the first person to bring before the notice of the profession the method of treatment of scarlet fever by inunction of eucalyptus oil in combination with other essential oils and camphors, allow me to point out to Dr. Knox Bond that his treatment of scarlet fever by eucalyptus oil was not after the method recommended by me in a paper to be found in the Transactions of the Epidemiological Society, and which has been republished by Lewis in a separate form. I am not astonished that his trial failed, and could have told him that it would if he had communicated with me. I and my son and many medical men have during the last two years treated all scarlet fever cases by inunction of Tucker's Eucalyptus Disin-

fectant with uniform success, shortening the duration of the fever, enabling the patients to mix with the rest of the family after ten days, requiring no isolation, and preventing all serious sequelæ. He will see in my paper that I condemn all greasy preparations for inunction, but the essential oils and camphors composing the disinfectant are all highly volatile, and are in no way greasy. I should like also to inform him that most of the eucalyptus oil of commerce does not possess the antiseptic qualities that are absolutely necessary for its successful use in infectious diseases. I have for some years tested experimentally the different eucalyptus oils, as well as other essential oils, and hope one day to make known the results of my inquiries, for there are some of these oils that are more powerful antiseptics and germicides than the oil of eucalyptus globulus.—Dr. J. Brendon Curgven in the *Lancet*.

HYGIENE.

SULPHURING OR BLEACHING DRIED FRUIT A MISTAKE, IF NOT A CRIME.

Dr. Joel W. Smith, in a paper before the American Public Health Association, calls attention to a subject which should command the careful attention of consumers of dried fruit, of conscientious fruit dealers, and of all health authorities.

As fresh fruit is not always obtainable, various methods for preserving it are in use, drying being one of the oldest and best for many fruits. Middle-aged people recollect when sun or air drying was the only method for market. Then some good housewife discovered that more rapid drying by artificial heat, with or without the addition of sugar, was a cleaner method, safer against fermentation and decay, retained the flavor better, and the fruit was also lighter colored, than when sun or air dried. The present evaporators are only an enlargement of the idea of such more rapid drying, while canning consists in the exclusion of the microörganic germs of fermentation.

This is an age of progress, yet experience often shows that not all changes are improvements. It is about fifteen years since the sulphuring or bleaching of dried fruit began. At first only the uniform light color was sought, as in apples, pears, etc., but for some years past nearly all the large evaporating establishments have "sulphured" all kinds of fruits and some vegetables, and now

much of the California sun-dried fruit for market is also treated in the same manner. The light color, especially of apples, early attracted unthinking consumers and commercial men, thus materially increasing the price of such fruit. That caused the practice to spread even to those who disapproved of it. The expense and trouble were very slight. Fruit so treated is said to dry more readily, consequently all now prefer to do it.

While the apparent change is only in color, there is a loss of the natural fruit flavor, even by the most careful sulphuring. Unfortunately, some people do not notice the difference, but careful comparison shows it, as is admitted by the manufacturers of such fruit.

The practice began in California with apricots, as early as 1879. At the Twelfth State Fruit Growers' Convention, held in Fresno during four days in November, 1889, a paper on "Fruit Drying" was read by J. L. Mosher, of San José, and in his paper he remarked,—"If fruit be picked before ripe and over-sulphured to produce whiteness, it is devoid of its true rich taste and flavor, and only requires polishing to make buttons." (The italics are his.) In discussing the paper, one gentleman said,—"I believe sulphuring the fruit is the greatest mistake in the world. I do it, but I believe it is wrong: the flavor of the fruit is gone after it is sulphured."

This change in quality was the first thing that called the attention of the writer's family to what was lacking in the "nice, uniformly colored" bleached fruits.

Later investigations have proved the presence of sulphate of zinc, "white vitrol," in all samples of fruit where zinc-surfaced trays were used to hold the sulphured fruit while drying. Interested parties have charged the German prohibition of American evaporated apples to rival trade opposition, but there is no German fruit to compete with them. The real cause was the finding of zinc poison in considerable quantity. A good paternal government aims to protect its people.

WHY SULPHUR FRUIT AT ALL?

The advocates of sulphuring fruit say,—(1) It dries quicker, (2) looks better, (3) keeps better, and (4) sells better. Besides, it makes ripe, unripe, and poor fruit all look alike; and if not so good for it, but few know it.

Sulphurous acid is formed by burning sulphur, and is readily absorbed by water. It abstracts oxygen from many vegetable

substances, and thereby bleaches them. It also tends to prevent microscopic organizations that cause fermentation. The acid in liquid form is colorless, very cheap, and smells like burning sulphur; is antiseptic, a preservative fluid for some substances,—sample fruits, etc. Sulphur is often burned to disinfect sick-rooms of disease germs, and to kill rats, mice, and vermin, but its use with food is objectionable. Ants and other insects, it is said, will not touch sulphured fruit, while they readily attack well ripened fruit that is not sulphured. The instinct of insects and animals is sometimes better than the practice of human beings. In general, substances that repel such creatures are hardly safe for human food.

THE EFFECT ON CONSUMPTION

has seemed to be a decided falling off in demand among the more intelligent class of people. Retail grocers know that many who once used dried fruit extensively say, "Somehow we have lost our relish for it," and have almost ceased to use it since the craze for sulphuring fruits began. Fruit men say, "The public demands sulphured fruit, will pay more for it, and we will supply it." The public will yet show them that it can get its eyes open. As the green and canned fruit interests are the only permanent gainers by the sulphuring process, they are interested to have it continued.

DIFFICULT TO OBTAIN.

It is not easy to obtain a superior quality of unbleached fruit. In 1889 several retail grocers who understood the question corresponded with parties evaporating apples. The reply was, that "if an order for not less than twenty barrels was received at one time, apples would be furnished unbleached, otherwise not."

SULPHURING NOT DESIRABLE.

The slightly yellowish-brown color of unbleached dried fruit is an evidence of ripeness, good quality, and proper drying. The more rapid the lighter will be the color, and the fruit will keep well if at once properly excluded from the air. When sulphured, the good, the poor, and the unripe all look alike. Not so with the unbleached. No poor nor unripe fruit can make good dried fruit. The gain of sulphuring is always with the dealer, and not with the consumer.

HEALTH AGAINST LOOKS.

In preferring looks to quality, the people are often at fault. Public enlightenment

will correct most dietetic errors. Good health is now sought by many, and will be by more in the near future, through correct living, rather than by the swallowing of drugs. And in that more excellent way, "in the good time coming," there will be no demand for sulphured and other drugged fruit among intelligent people.

DANGERS.

There is danger from fruit in metal cans, as is well known, and fresh fruit is frequently unobtainable, while both are often more expensive than dried fruits. Good unsophisticated dried fruits are always harmless. If green fruits are at times unobtainable, canned fruits dangerous, and a popular craze has rendered dried fruits also dangerous, what can the suffering public do? It is between the alternatives of using no fruit, or that which is injured or poisonous. Is the sulphuring of fruit a mistake, or a crime?

TO CORRECT THE ERROR,

enlighten the people, and prohibit injurious practices. Legal suasion only will stop it at present. The common schools in many states are required to teach the effects of alcohol and narcotics. Why not also include the effects of different foods?

MEDICAL CHEMISTRY.

APYONIN.

Apyonin is the name of a substance of the methyl violet class which has been introduced as an antiseptic similar to Merk's pyoktanin. It is a yellow, crystalline powder, slightly soluble in cold and hot water, soluble in alcohol, and difficultly soluble in ether. Heated it sublimes, charring at a higher temperature, and burning without ash. The water solution is neutral, and gives a precipitate with caustic potash, which is soluble in alcohol. The plain solution produces colors on the addition of hydrochloric acid or peroxide of hydrogen solution. We are without particulars of the therapeutics of this substance, which is made by Petit, of Paris.—*Chemist and Druggist*.

IRON SALTS—THEIR FATE AFTER ENTERING THE CIRCULATION.

Jacoby (*Archiv für Experimentelle Pathologie und Pharmakologie*, Vol. XXVIII.; p. 264.) recently investigated this subject by

experiments on animals. He found that the iron salts, when injected into the blood, are eliminated in a few hours to but a very small extent (about 10 per cent.) with the urine, intestinal secretions, and bile; the greater part (about 50 per cent.) however, is deposited in the liver, and the remainder in other organs (spleen, kidneys, walls of the intestines. This deposition is ended in 2-3 hours, after which the blood is free from the metal introduction.—*Merck's Bulletin*.

IODIDES OF ANTIPYRIN.

M. Duroy reports (*Bulletin de l'Académie de Médecine*) that he has obtained several iodides of antipyrin, all of which are capable of being used in therapeutics. The method of preparing an iodide of antipyrin is very simple. One equivalent of iodide dissolved in alcohol of 90°, and brought into contact with an equivalent of antipyrin dissolved in five times its weight of distilled water, yields a brick-yellow precipitate which is antipyrin iodide. It is soluble in two-and-a-half times its weight of water at 25° C.

NEWS AND MISCELLANY.

FANCIFUL ANIMAL REMEDIES.

Edible birds' nests are, of course, in high repute as aphrodisiacs, but they are more food articles than medicines.

The shells of the mollusca are used medicinally, thus *clam shells* are cathartic; *oyster shells* administered for deafness. *Fossilized shells* are used as a powder in ophthalmia and in scabies; internally in fever and in syphilis. *Coral* is also applied in powder to opacities of the cornea, and as an astringent for epistaxis.

Seed Pearls are prescribed in affections of the heart and liver; in the form of a powder to ulcers, and opacities in the cornea; in deafness it is put into the interior of the ear, and is applied to pustules of small-pox. This remedy is, however, dear, being quoted at \$160 the catty or pound.

Petrified crabs are applied to boils and sores, etc. Fragments of these fossil crabs crushed, powdered and finely levigated are used in opacities and other affections of the eyes, and sell at from \$30 to \$300 a picul in different localities.

If we pass to the lower order of insects, we find the skins of the *dung beetle* fetch £3 the cwt., for medicine. The flesh flies

(*Musca carnivora*) collected on putrid carcasses are torrefied and employed as drugs. *Maggots* are prescribed in the delirium of fever and dysentery. *Silk-worms* in cystitis; after being burnt the ash is mixed with wine and drank, in order to cause the bursting of abscesses.

The larva of the *grasshopper*, torrefied and pulverized, made into pills, are considered anthelmintic and given to children in fevers.

Wood bugs (*Cimex*) are also torrefied and given as medicine. The bodies of *Cicada sanguinolenta*, with the wings and feet taken off, are considered a cure in hydrophobia.

Caterpillars are considered good for bronchial complaints; are given as a purgative and anti-spasmodic, and are apparently cheap, selling at \$6 the picul. The cocoons of a caterpillar are applied in inflammation of the eyes.

A decoction of *centipedes* is used in gonorrhoea; powdered they are applied externally to venereal sores, but it costs \$150 a picul.

Cantharides are used in hydrophobia.

Cuttle-fish bone, mixed with native wine, is given for cancer.

A species of green *mantis* and its nests are used in cases of incontinence of urine and spermatorrhoea. The *cricket* forms the basis of a medicine to throw out splinters which have entered into the skin. It is considered anti-hydrotic. Three or four such crickets are administered in a wineglassful of Chinese rice wine. The drone or *wasp* is used in cases of bites by spiders, ulcers and leucorrhoea. It is said also to cure toothache.

But while we may smile at most of these Chinese remedies, it should be borne in mind that as great ignorance prevailed, and as much prejudice existed among ourselves in times not long passed, before chemical knowledge and scientific discoveries had made such rapid strides.

Take for instance the following asserted facts:

Had one of our ancestors a distressing toothache, there were ready at hand the *weevil* and the *lady-bird*, either of which would be crushed and applied to the afflicted part. Nay, did he wish to get rid of the offending organ altogether, he had but to touch it with the ashes of burnt "ammets or pismires," and straightway the tooth would drop from the gum. Had he the misfortune to sprain his leg or bruise his foot? Two at least of the beetles which dwell in the excrementitious matter, *Geotrupes* and *Aphodius*, were specifics held in high estimation. The yellow matter which

exudes from the joints of the oil beetle was held to be as efficacious in dropsy or rheumatism as in hydrophobia, and no doubt was so. Another infallible remedy against the bite of a mad dog consisted of the fat white *maggots* generated in the putrid carcass of the dog itself. Truly a case of homœopathy run mad! That foul disease, leprosy, could not stand before the bruised body of a *meal-worm*. The great jaws of the *stag-beetle* when powdered, we are told, proved a certain cure in most of the maladies incidental to childhood. The different *tree bugs* were good against ague; the male cricket taken internally could drive away a cold. Was the cold accompanied by headache? There were plenty of remedies at hand, such as *earwigs* and *cockroaches*. This last insect was especially valuable, for according to Dioscorides (whose receipt was unhesitatingly reproduced by Mouffé in the 17th century), the fat of the cockroach, pounded with oil of roses, was singularly efficacious in earache, and the same insect boiled in oil removed warts. Snake poison, too was rendered perfectly harmless, if the patient could be induced to swallow one or two *bed-bugs*!

There was a time when three *gnats* were taken as a dose, just as three grains of calomel might be taken now; while three drops of *lady-bird's milk* were formerly prescribed as seriously as a small dose of some fashionable medicine at the present day.

It is even still alleged that the little insect known as the *golden cetonia*, found in considerable numbers on rose trees, when pounded to a powder and administered internally, produces in the person a sound sleep, which lasts sometimes thirty-six hours, and which has the effect, in many cases, of nullifying hydropic symptoms.

A kind of paste made from the cockroach, administered internally, was found one of the most powerful antispasmodics known, and particularly useful, when diluted with water, in the case of lock-jaw.

Considering the number of species (at least 150,000) and the varied properties they possess, it is astonishing how few insects have been pressed into man's service, either for curative or culinary purposes.—P. L. Simmonds, in *Amer. Jour. Pharm.*

It has been calculated that the electromotive force of a bolt of lightning is about 3,500,000 volts, the current about 14,000 amperes, and the time to be about 1-2000 part of a second. In such a bolt there is an energy of 2,450,000 watts, or 43,28,182 h. p.

PRELIMINARY PROGRAM OF THE FIRST
ANNUAL MEETING OF THE AMERICAN
ELECTRO-THERAPEUTIC ASSOCIATION.

TO BE HELD AT PHILADELPHIA, PA., SEPTEMBER
24TH, 25TH AND 26TH, 1891, IN THE HALL
OF THE COLLEGE OF PHYSICIANS, CORNER
18TH AND LOCUST STREETS.

FIRST DAY, THURSDAY, SEPTEMBER 24.

3 P. M.

1. President's address—Dr. G. Betton Massey, Philadelphia.
2. Electro-Therapeutics in America; An Historical Survey—Dr. A. D. Rockwell, New York.
3. The Action and Application of the Faradic Current in Gynecology—Dr. Augustin H. Goelet, New York.
4. Alternative Currents—Dr. Horatio R. Bigelow, Philadelphia.
5. The Treatment of Corneal Opacities by Galvanism—Dr. C. A. W. Alleman, Brooklyn, N. Y.

SECOND DAY, FRIDAY, SEPTEMBER 25.

10 A. M.

6. Report of Seventy-five Cases of Uterine Myomata Treated by Electricity—Dr. J. H. Kellogg, Battle Creek, Mich.
 7. Two cases of Fibroids where Electricity ceased to control Hæmorrhage after a time, although eminently satisfactory at first—Dr. H. E. Hayd, Buffalo, N. Y.
 8. The Treatment of Fibroids by Electricity—Dr. W. H. Hutchison, Providence, Rhode Island.
 9. Electro-Puncture in Uterine Fibroids—Dr. G. Betton Massey, Philadelphia.
 10. Electricity in Chronic Parametritis—Dr. Von Raitz, New York.
 11. Report of a case—Dr. A. H. Buckmaster, Brooklyn.
- 3 P. M.
12. Some New Applications of Electro-Therapeutics—Dr. Frederick Peterson, New York.
 13. The Analgesic Effects of Galvanism—Dr. Landon Carter Gray, New York.
 14. Electricity in Diseases of the Stomach, with Exhibition of Patient—Dr. Lawrence Wolff, Philadelphia.
 15. Electricity in Carcinoma—Dr. Robt. Newman, N. Y.

16. Title not Received—Dr. W. J. Morton, New York.

17. Title not Received—Dr. Henry McClure, Cromer, England.

18. Some Points in the Technique of Electrolytic Epilation—Dr. Plym S. Hays, Chicago, Ill.

8.30 P. M.

BUSINESS MEETING.

THIRD DAY, SATURDAY, SEPTEMBER 26.

10 A. M.

19. A Rare Case of Twin Extra—and Intra-Uterine Pregnancy Treated by Electricity—Dr. G. H. Whitcomb, Greenwich, New York.
 20. Electricity in the Treatment of Rheumatism—Dr. W. F. Robinson, Albany, New York.
 21. The Treatment of Subacute Articular Rheumatism by Electricity—Dr. M. A. Cleaves, New York.
 22. Electricity in Anchylosis—Dr. Von Raitz, New York.
 23. Has Electricity any Action as a Germicide, or in Producing Poisonous Results in Food—Dr. W. R. D. Blackwood, Philadelphia.
 24. Exhibition of a Rectal Electrode, with Remarks on its Application—Dr. Guy Hinsdale, Philadelphia.
- 3 P. M.
25. Abdominal Electro-Puncture in an Ovarian Tumor—Dr. G. Betton Massey, Philadelphia.
 26. Eight Months' Work in the Dispensary for the Treatment of the Diseases of Women by Electricity—Dr. H. R. Bigelow, Philadelphia.

AN ADVERTISING DOCTOR.

That there is a great deal of humbug in the part of the medical code of ethics which prevents a doctor from advertising in the daily newspapers has once more been proved by an elaborate article from a rhinologist of Rochester, N. Y. This professional nose carpenter is in good standing in the medical profession, ranks well in the American Medical Association, and would probably resent in a way that could not be misunderstood any insinuation that he did not make his daily walk conform to the perpendicular rules of the medical code. The code, it seems, is in no way violated when in an elaborate four-column article copiously illus-

trated he describes in the *New York Medical Record* his success in the work of mending or straightening noses. The article is embellished with look-on-this-and-then-on-that cuts that show the before and after treatment, show noses once as crooked as a ram's horn that under this doctor's magic touch have grown as symmetrical as the face of Powers' Greek slave. All this is set forth in a way to catch the popular eye. It is not set down in these technical terms which tend to tickle the eye and ear of the Hippocratic elect. Though in a professional journal it is written and pictured in a style that he who runs may read and understand.

"But," say the sticklers for the code, "the article is in a medical journal, and not intended for the humble laity." If not for the laity, then why should photographs of homely faces, made handsome, be reproduced? Could not a generous use of the beloved technical terms have made the article as intelligible to the learned profession as pictures? Must the mature man of science be enlightened with object lessons? The facts are the article was prepared for the general public, and to this end will have general circulation. To be sure, the space it occupied was not paid for as an honorable merchant or manufacturer pays for space he occupies in a newspaper when he comes to announcing his ware, but the books of the *Record* will probably show that the author of the article ordered an unusual supply of copies the week his article appeared. Before this time those copies have probably been mailed from Rochester, not to professional men, but to the doctor's old patrons and to a crooked-nose generation.

The object of the article is as patent as is a "for sale" legend nailed to a dwelling house. There was but one object, and that one certainly was not to educate any of the regular *Record* subscribers. It was a case of advertising, pure and simple, a kind of advertising in which the same doctor has often indulged. It is free advertising at that. The code justifies it, and yet not long ago because a Chicago doctor tried precisely the same thing in the daily press, and paid for the same like an honorable man, by the terms of the code he was expelled from the medical profession."

We clipped the above article from one of our daily newspapers, and print it because several such editorials have appeared in this paper. It does not appear to call for an answer, because this whole subject of advertising has been thoroughly gone over, and

settled to the satisfaction of the medical profession.

We are always pleased to know that our friends are interested in our welfare, and thankfully do we receive advice upon all subjects, but we believe that we are able to conduct our affairs without any assistance or dictation from "the Press."

Personally, we can see no harm in a man publishing an article in a medical journal and embellishing it with illustrations. Nor can we see the impropriety of ordering reprints of the article, to be distributed as the author may see fit.

It is quite pathetic to see the indignation expressed above, emanating from a business whose chief profit is derived from advertisements. We assure the editor that we are satisfied with the present method, and hope he will not allow himself to be disturbed by any failure upon our part to appreciate his unselfish efforts.—*Cinn. Lancet and Clin.*

THE TRANSFERRED MALADY (A CASE OF METASTASIS).

(IN AN OCULIST'S OFFICE.)

How sweet the girl! I saw her pass
The waiting group, with dumb surprise;
A golden-haired, trim, willowy lass,
With heaven's soft azure in her eyes.
What could there be in them to mend?
Nothing, I stoutly should insist;
But still she asked to see my friend
The bachelor—and oculist.

I saw her take the patient's chair
(Venus and Science matched amain),
And, though his search found little there,
He asked the girl to come again.
But while with his ophthalmoscope
He sought the source of her distress,
In the next room, with rhyme and trope,
I tried my rapture to express.

"Neuritis of mild type it is,"
He said (whatever that may be);
"Here is a wash I use for this,
But come each day and visit me."
I knew the doctor's ready skill;
Yet while he battled with the case,
His eyes received from hers a thrill:
A crimson flush suffused her face.

Daily, as she was bid, she came;
Daily the doctor scanned her eyes.
A cardiac spasm, I need not name,
At length he struggled to disguise;
For gazing in those orbs of blue

So close, transferred an aching smart.—
No "wash" he ever gave or knew
For ailing eyes could help his heart.

The girl was cured, the patient lost.

What now avails his utmost fees,
Or rapid skill, to be so tossed

About by Cupid's sharp caprice?

Those blue eyes, had I the case,

Should not have been for years dismissed.

To keep them always face to face

I'd die—a baffled oculist.

—Joel Benton in *Harper's Monthly*.

CULTIVATION OF THE LEPROSY BACILLUS IN SERUM.

Dr. Beaven Rake and Dr. G. A. Buckmaster, members of the Leprosy Commission, have during the last two months and a half been engaged in bacteriological work at Almora Leper Asylum and in the new laboratory which has been built at Simla by the Government of India for the use of the Commission. They have now succeeded in cultivating the leprosy bacillus in serum from a blister. The first series of experiments, begun on March 31st, proved negative. On April 14th a blister was raised over a tubercle on the face of a leper at Almora, and another over normal skin on the back of the same patient. Specimens of the fluid from these blisters were taken in a sterilized capillary tube, and allowed to mix. Previous examinations of blister fluid over a tubercle in this patient had shown leprosy bacilli. The capillary tube was kept at a constant temperature of 98° F., and was taken to Simla, where microscopic examination on May 2d showed some brightly stained leprosy bacilli and some turbidity of the liquid. On May 14th a tube of bouillon was inoculated from this tube of serum, and on May 26th there was an undoubted growth of leprosy bacilli on the surface of the bouillon. From this culture vigorous growths of leprosy bacilli were also obtained on gelatine and agar. Another capillary tube of serum prepared in the same way from another leper gave precisely similar results.

"TROPHIC CENTRES IN THE CORD."

Under this title M. Brissaud has contributed an important and suggestive paper, which appears in a recent number of the *Archives de Neurologie*. The paper deals primarily with the subject of alcoholic neuritis, and the subject discussed is whether associated with the changes, which are acknowledged to be present in the peripheral nerves, there may not coexist in the spinal

cord some change in the cells of the anterior horns of the grey matter. It is not denied that the chief force of the poison seems to expend itself on the peripheral nerves in alcoholic paralysis, as in other forms of toxæmia in which weakness and muscular wasting are observed, such as lead palsy; but the author contends that as in some of those cases, there certainly are changes in the grey matter of the cord; so, it may be, similar or analogous may at times be recognizable in cases of multiple neuritis from alcohol. Changes of this nature have actually been described by d'Oettinger and Korsakoff, and by Finlay and Sharkey, and the author points out the probability of such changes occurring especially when the symptoms of muscular weakness and wasting with localized pain are confined to the region of distribution of a certain nerve or plexus of nerves. And even if changes in the cord are not recognized, it does not follow that they are not present, for it may be that changes do exist which by our present methods are still unrecognizable. A curious fact in this connection is that mentioned by M. Raymond, who produced artificially a slight degree of myelitis in animals, the symptoms of which soon disappeared. When the animals were killed a year or eighteen months later examination could reveal no trace of the original myelitis, but the nerves in connection with the injured segment of the cord were not unfrequently found to have undergone profound alteration.—*Lancet*.

A FIVE YEARS' MEDICAL COURSE.

The Medical Council of the College of Physicians and Surgeons of Ontario recently passed the following resolution: "On and after July 1, 1892, every student must spend a period of five years in actual professional studies, except as hereinafter provided, and the prescribed period of studies shall include four winter sessions of six months each and one summer session of ten weeks; the fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario and six months at one or more public hospitals, dispensaries or laboratories—Canadian, British or foreign—attended after being registered as a medical student in the register of the College of Physicians and Surgeons of Ontario; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made."